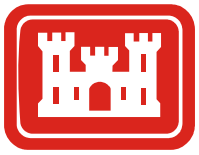
ENVIRONMENTAL ASSESSMENT
HAM CREEK PARK DEVELOPMENT
WHITNEY LAKE, JOHNSON COUNTY, TEXAS



Prepared for

Whitney Lake Project Office

by

US Army Corps of Engineers
Fort Worth District

February 2006

FINDING OF NO SIGNIFICANT IMPACT

ENVIRONMENTAL ASSESSMENT
HAM CREEK PARK DEVELOPMENT
WHITNEY LAKE, JOHNSON COUNTY, TEXAS

Description of Action. The purpose of the Federal action is to develop Ham Creek Park into a class A campground at Whitney Lake, Johnson County Texas. The U.S. Army Corps of Engineers (USACE) would then outgrant Ham Creek Park to Johnson County for operation and maintenance. The proposed plan would include construction of roads, a boat ramp with parking, a gate house, group pavilions, day use sites, recreational vehicle and primitive camping sites, hiking trails, an equestrian center, and an amphitheater.

Anticipated Environmental Effects. Alternatives considered included four construction alternatives and the no action as described in the environmental assessment (EA).

There will be no significant adverse impacts to the human and natural environment associated with proper implementation of the proposed action. No significant adverse environmental impacts are anticipated for soil, waters of the U.S., water quality, fish and wildlife, aquatic vegetation, noise and general aesthetics, cultural resources, hazardous, toxic, and radioactive wastes, air quality, recreation, or socioeconomics within the subject property. Approximately 32 acres of grasslands, 2.4 acres of riparian woodlands, and 3.25 acres of upland woodlands would be affected by the proposed action, but mitigation would be preformed to help offset the impacts.

USACE entered into formal Section 7 Endangered Species Act (ESA) consultation with the U.S. Fish and Wildlife Service (Service) regarding the effects of the project on the golden cheeked warbler. The Service issued a biological opinion that determined the project would destroy 8.5 acres and cause harassment on 109 acres of golden cheeked warbler habitat. The Service determined that a total of 117.5 acres would be authorized as incidental take under Section 9 of the ESA and that the project would not jeopardize the continued existence of the golden cheeked warbler. USACE would implement all of the terms and conditions stated within the biological opinion.

There would be impacts to approximately 1.7 acres of waters of the U.S. from the construction of the boat ramp. These impacts would be covered by Letter of Permission Procedure CESWF-97-LOP-1 (LOP-1).

Two requests were received asking for copies of the EA and for clarification of parts of the EA. A comment was received from the Federal Emergency Management Agency requesting that the local floodplain administrator be contacted for the review and possible permit requirements for the project. The Johnson County Floodplain Coordinator was contacted and no local permits are required for the project. A no comment letter was received from the Service in response to the EA. A comment was received from the Texas Commission on Environmental Quality requesting that USACE dispose of the materials from the existing structures in a proper manner, use appropriate best management practices , stabilize disturbed soils to minimize soil and sediment disruption, and ensure decant water from upland disposal areas not exceed 300 mg/L of Total Suspended Solids. USACE will ensure these comments are implemented. Texas Parks and Wildlife recommended that USACE follow the Service's recommendations and the

terms of the lease to Johnson County include a management plan for the GCW. USACE will implement these recommendations.

Facts and Conclusions. Based on a review of the information contained in this EA, it is concluded that the implementation of the Ham Creek Park Development (Alternative 1) is not a major Federal action, which would significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969, as amended.

John R. Minahan
Colonel, Corps of Engineers
District Commander

3/28/06
Date

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WHITNEY LAKE
JOHNSON COUNTY, TEXAS

1.0 INTRODUCTION

1.1 BACKGROUND

The U.S. Army Corps of Engineers (USACE) in conjunction with Johnson County proposes to develop Ham Creek Park along the Brazos River arm of the northern portion of Whitney Lake to expand public recreational opportunities. The Whitney Lake Office received funding from Congress in the amount of $900,000 for expenditure during Fiscal Year 2006 for initial development of a multi-use park facility at Ham Creek Park. It is anticipated that future funding would be available from Congress to complete the park development.

A team was assembled to explore alternatives for park development and recommend a park development plan to meet the public's current and future recreational needs. The team included members from local chambers-of-commerce, businesses, mayors, and adjacent landowners. The team produced four construction alternatives and provided a park development plan recommendation. Each of the alternatives, including the no-action alternative, and the potential impacts associated with each alternative, was evaluated.

Figure 1 provides an aerial view depicting the existing park. Larger images of these figures are also provided in Appendix A of this Environmental Assessment (EA). The east side of the park is currently closed to vehicular access; however, the park remains open to foot traffic where visitors can still enjoy hiking, fishing, and hunting. The west side of the park contains only a one-lane boat ramp, which has remained open when lake levels are adequate for boat ramp launching. Illegal all-terrain vehicle use occurs within the park through access gained through cut barbed-wire fences along the perimeter of the park. A history of park operations is discussed later in this document.

A Master Plan for Whitney Lake was developed in 1972 for the operation and maintenance of the lake. In 1976 a Final Environmental Statement for the Operations and Maintenance Programs of Whitney Lake, Waco Lake, Proctor Lake, Stillhouse Hollow Dam and Lake, and Somerville Lake, Brazos River Basin, Texas was prepared to address the impacts of operating Whitney Lake. In 1983 an Environmental Impact Assessment was prepared for the partial closure of Ham Creek Park to vehicular traffic and relocation of 12 picnic tables to McCown Park at Whitney Lake. The park remained designated as a park, but it was limited to low density recreation such as hiking, bird-watching, etc.

Figure 1: General Map of Existing Park

Section A: Section A is a 51 acre plot on the east side of Ham Creek.

Section B: Section B is a 61 acre plot on the east side of Ham Creek. This side of Ham Creek is accessible off of FM 916.

Section C: Section C is a 46 acre plot on the west side of Ham Creek.

1.2 PURPOSE AND NEED

The northern portion of Whitney Lake continues to receive high visitation, especially during spring and summer months. The nearest recreational facilities to Ham Creek Park, Kimball Bend Park, approximately 15 miles away, and Plowman Creek Park, 18 miles away, frequently become inundated with visitors, indicating a need for additional recreational facilities within the area. Development of Ham Creek Park would offer relief for nearby

highly-visited parks and improve visitors' recreational experience. Ham Creek Park allows park visitors entering from Johnson County more convenient access to recreational facilities.

Ham Creek Park currently only offers a boat ramp and it is only available above elevation 530 feet MSL, 3 feet below conservation pool. In 2003, lake levels were too low for visitors to utilize the boat ramp. The remaining park areas remain closed, but foot access is permitted and some visitors occasionally utilize the areas for hiking, sightseeing and fishing. Initial funding for Fiscal Year 2006 to begin construction of recreational facilities at Ham Creek Park is already appropriated by Congress.

The purpose of this environmental assessment is to address potential environmental impacts associated with the alternatives for development of Ham Creek Park, re-classification of Ham Creek Park as a high density recreation park, and leasing the park to Johnson County for operations and maintenance. Since at least parts of Ham Creek Park have been officially closed and the park has been mostly inoperable since the early 1990's and there is potential habitat for the golden cheeked warbler (*Dendroica chrysoparia*) (GCW) in the park, USACE felt it prudent that an environmental assessment be prepared to address potential environmental impacts of the proposed alternatives. Since GCWs are located on Federal property and adjacent private property, protective measures are required to minimize impacts to the species.

2.0 DESCRIPTION OF ALTERNATIVES

2.1 GENERAL

All construction alternatives include construction of facilities for day-users and campers. Existing facilities and roadways would be utilized to the maximum extent possible. Two existing restrooms would be demolished as renovation of these facilities to serve current needs is not economical. Park development would be contained within footprint as designated in the Whitney Lake Master Plan. All roadway surfaces would remain 20 feet wide. Gravel roadway surfaces would be improved to an asphalt surface and existing asphalt surfaces would have new asphalt surfacing applied. Road shoulders and adjacent drainage ditches would be widened. Existing shoulders and drainage ditches vary up to 5 feet from the edge of the roadway. New road shoulders would be up to two feet on both sides of the road. New drainage ditches, with culverts under the roadway as necessary to allow for adequate drainage, would be up to six feet wide. Utility lines, including electric, water, sewer and telephone, would be placed within the road shoulders. It is anticipated that the existing county water system would provide water services. Tree canopies along roadways would remain intact as much as possible.

Each alternative includes hiking trails, with the proposed plan including an additional hiking/equestrian trail. All trails would be designed to minimize vegetation removal and no trees would be removed. All trail surfaces would be unimproved surface. Widths of hiking trails would be about 8 to 10 feet and the hiking/equestrian trail would average 11 feet. All trails would accommodate emergency and operational vehicles if necessary. Tree limbs overhanging the hiking/equestrian trail at a height less than 16 feet would be trimmed to allow for horse and rider clearance. Specific trail lengths are not yet determined, but it is estimated the hiking trail would be approximately 1.5 miles long within the park and the hiking/equestrian trail would be a loop extending outside the park on the east side of the park approximately 1.5 miles long.

2.2 NO ACTION ALTERNATIVE

Ham Creek Park would remain in its present condition and Ham Creek Park would not be developed into a multi-use Class A Campground. Park visitors would continue to utilize the existing boat ramp only when lake levels are sufficient to allow limited lake access and only be permitted foot access to remaining portions of the park.

2.3 ALTERNATIVE1 (Proposed Action)

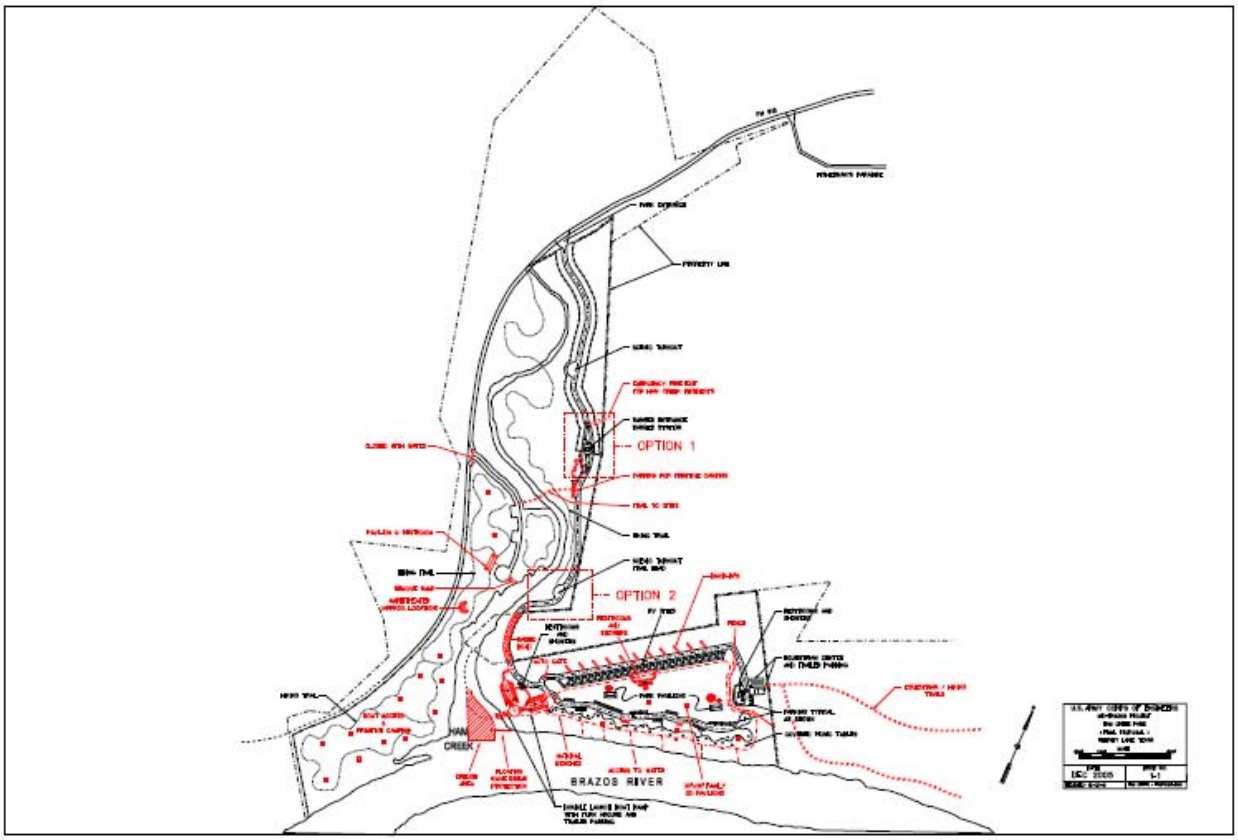


Figure 2: Alternative 1 (Proposed Action)

Alternative 1 shown in Figure 2 (Figure also larger in Appendix A) above includes constructing a gate entrance complex along the access road at location approximately 1,500 feet from entrance in Section A, labeled Option 1 in Figure 2. The complex includes one-way entrance and exit lanes, turn-around, gatehouse, parking lot, pull-off lanes, gate attendant pad and an emergency road adjoining roadway within Fisherman's Paradise subdivision. The emergency road allows alternate access for emergency exit when necessary. The complex would be comprised of approximately 2 acres. Actual location of facilities would be determined by that which preserves the greatest existing vegetation, specifically trees.

A two-lane boat ramp with a parking lot containing approximately 50 parking spaces to accommodate vehicles with boat trailers would be constructed at the confluence of Ham Creek within Section B. A courtesy dock for boat loading and unloading would also be placed adjacent to the boat ramp and approximately 150 feet of shoreline along Ham Creek would be cleared to allow for additional access for boat loading and unloading. The plan would including dredging approximately 1.7 acres at the confluence of Ham Creek and the Brazos River to allow for increased boat access at the boat ramp in Section B at much lower lake elevations. A floating wave break would also be placed to reduce wave action on the boat ramp and adjacent shoreline.

Additional activities in Section B would include constructing a waterborne restroom with showers at the new boat ramp and at the equestrian center. Approximately thirty recreational vehicle (RV) campsites with electrical and water hook-ups would be constructed along the upper portion of the section and twenty picnic sites would be placed near the lakeshore. Section B would also include a dump station, two pavilions, equestrian center and trailhead for a hiking/equestrian trail.

Twelve primitive campsites, hiking trail, pavilion with restroom and amphitheater would be constructed in Section C. The existing boat ramp and roadways within the section would be closed. These facilities would only be accessed by foot along a hiking trail from the parking lot below the gate entrance complex. Special permits may be issued to large organizations to allow for limited vehicle access (i.e. school busses). No improvements would be made at the point where the hiking trail crosses Ham Creek. The creek bed is comprised of rocks and gravel and it remains dry except for lake flooding events and short durations after heavy rainfall events. During such events, the facilities located in Section C would be closed.

Barbed-wire fence and/or pipe fence would be installed along the perimeter of the entire park, 7,159 feet, to prevent ATV access. Woody vegetation would be cleared eight feet from the property line. Vehicle barriers in the form of pipe fence would be placed along roadways, parking areas and trailheads to restrict vehicle access to road surfaces only. Security lights would be installed at the boat ramp, restrooms and gate entrance complex for security and safety purposes. Refuse receptacles would be utilized throughout the recreation area.

Construction would occur in phases over several years as funding is received, with initial construction beginning in May 2006. Phase I includes renovating existing roadways and constructing the boat ramp with parking lot and courtesy dock. Construction of the gate entrance complex, day use facilities, and restrooms would be completed in Phase II and the construction of campsites, group shelters, trails and utility lines would occur in Phase III.

2.4 ALTERNATIVE 2

Alternative 2 is the same as Alternative 1, except that the gate entrance complex would be constructed within Section A nearest Section B (Option 2).

2.5 ALTERNATIVE 3

This alternative, shown on figure 3, includes construction of the gate entrance complex and two-lane boat ramp at the same locations as Alternative 1. Section B includes a parking lot serving the boat ramp accommodating about 30 vehicles with trailers, two restrooms, pavilion, approximately 30 RV campsites with electrical and water service, and approximately 20 picnic sites. A dump station would be placed within Section A near Section B. Roads would have to be cleared and widened.

Section C includes a hiking trail similar to Alternatives 2 and 3 with primitive campsites placed along the lake side of the hiking trail. An asphalt road would be constructed from the gate entrance complex to the existing roadway within Section C and placement would be determined by that which results in the least impact to existing woody species. Tree canopies along roadways would remain intact as much as possible.

A concrete low-water crossing, approximately 26 feet wide (including 4 foot wingwalls) by 100 feet long, would be constructed across Ham Creek. A small 18-inch culvert would allow for minor creek flow through the crossing. A restroom with shower facilities would be constructed to serve primitive campsites and the existing boat ramp parking lot would be utilized as a parking lot for approximately 20 vehicles. Primitive campsites including a table and tent pad would be constructed along the hiking trail on the south portion of Section C. Specific number of primitive campsites would be determined by trail placement and woody vegetation present. Existing boat ramp and unutilized existing roadways would be closed, with existing roadway between section and F.M. 916 serving as an emergency exit.

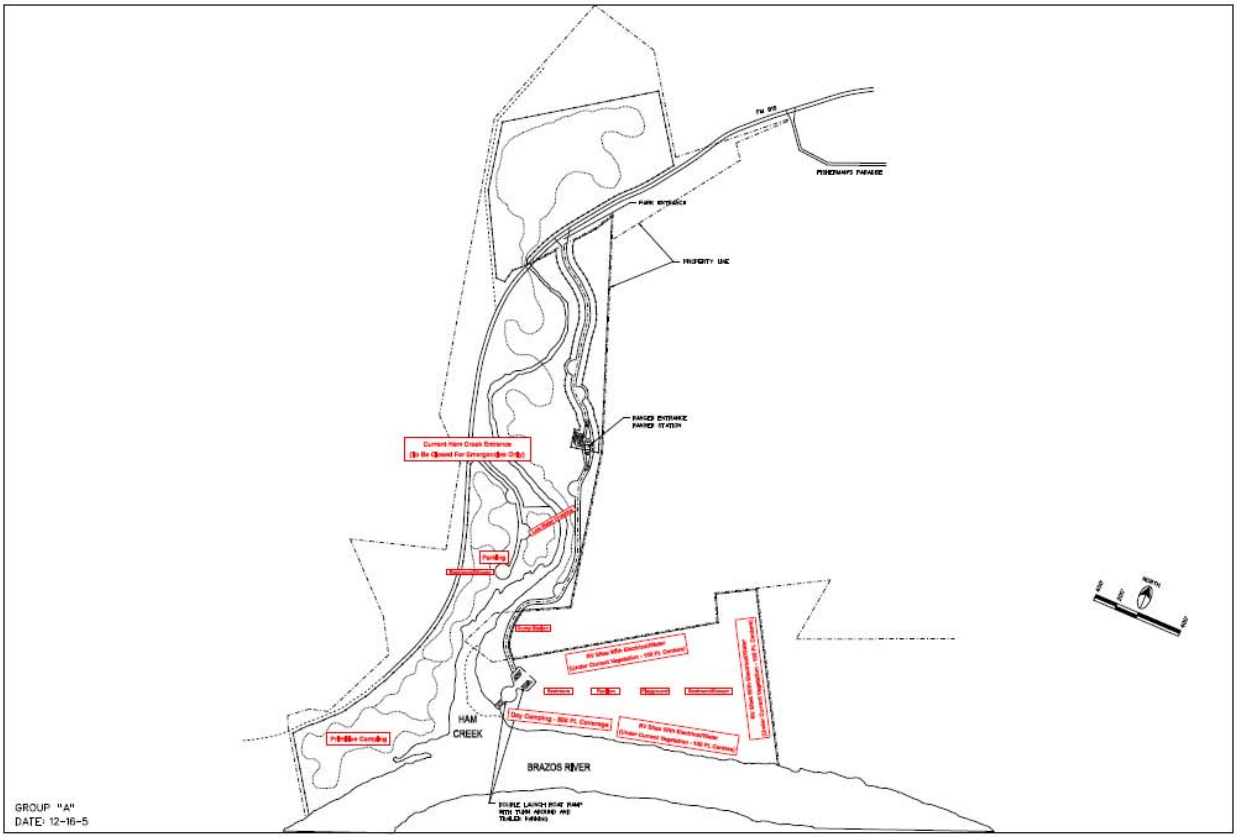


Figure 3: Alternative 3

2.6 ALTERNATIVE 4

This alternative places the gate entrance complex along the existing roadway in Section C, approximately 700 feet from F.M 916. Section C would include a new camping loop containing 31 RV campsites with electrical and water service and a waterborne restroom with showers. The existing boat ramp would be closed, but the roadway would remain to provide access to a new amphitheater. An emergency exit would also be placed between the camping loop and F.M. 916.

A two-lane boat ramp would be built at the same location within Section B as the other alternatives. The boat ramp parking lot would accommodate 30 vehicles with trailers. The boat ramp would be dredged similar to Alternative 1. In addition, a natural slough across from the boat ramp below the new camping loop in Section C would be dredged and enlarged to accommodate shoreline boat parking.

Section B would also include construction of 27 picnic sites and two large pavilions. Parking lots to accommodate approximately 100 vehicles would also be constructed.

A hiking trail would be placed extending along the shoreline from an area near the boat ramp to an undetermined location outside the east park boundary and loop back to the park. It is estimated the trail would be approximately 1.5 miles long.

Approximately 7,500 feet of new asphalt roadway would be constructed. Accessing Sections A and B from the gate entrance complex in Section C requires a larger, higher concrete low-water crossing across Ham Creek, as compared to Alternative 3, because it is a main access road. The crossing would measure approximately 32 feet wide (including 4 foot wingwalls) by 300 feet long. A dual 18-inch culvert would allow for minor creek flow through the crossing.

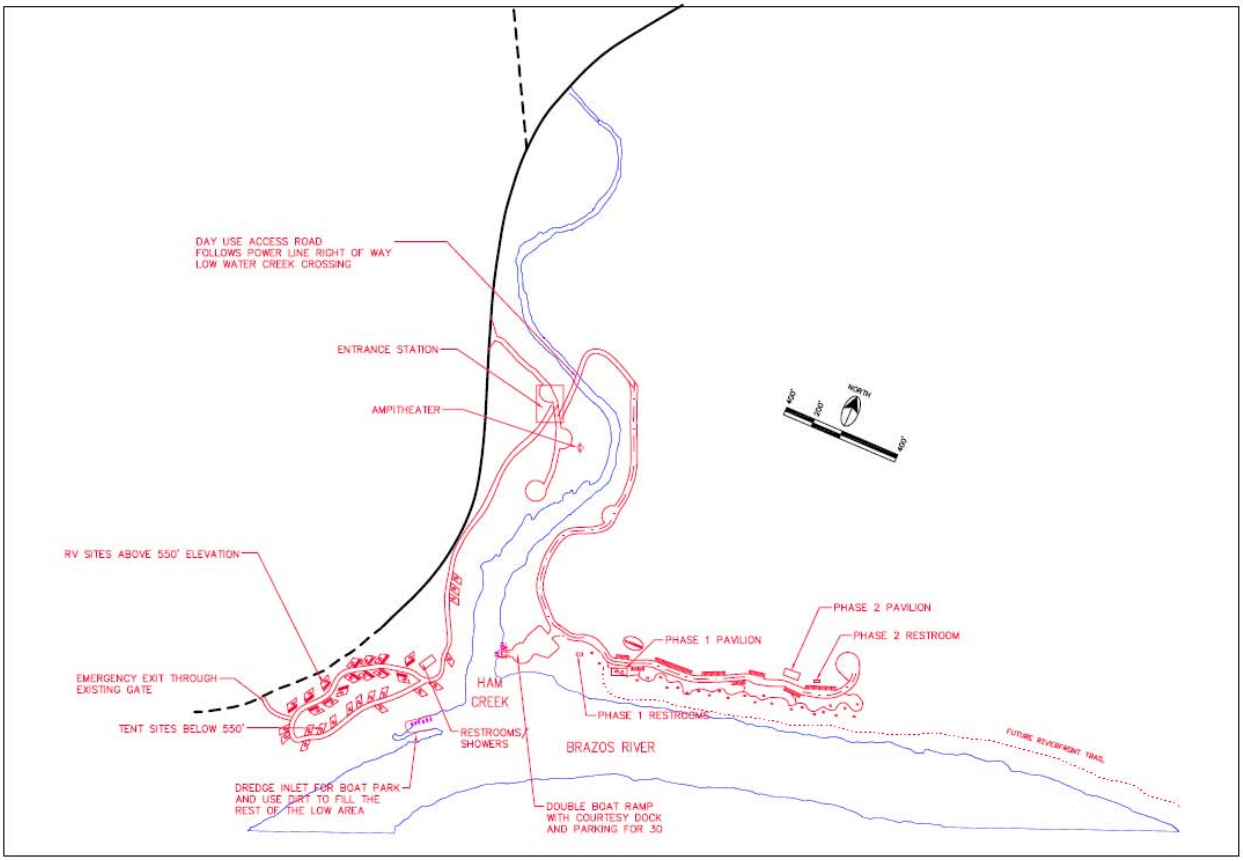


Figure 4: Alternative 4

3.0 AFFECTED ENVIRONMENT

3.1 PROJECT SETTING & LAND USE

Whitney Lake is a multipurpose water resource development project authorized by the Flood Control Acts of August 18, 1941(Public Law 228, 77th Congress, 1st Session) and December 22, 1944 (Public Law 534, 78th Congress, 2nd Session) to provide flood control, hydroelectric power, water conservation for domestic and industrial uses, recreation and other beneficial water uses. The lake is located along the county lines of Hill and Bosque Counties on the main stem of the Brazos River at river mile 442.4, 5.5 miles southwest of Whitney, Texas. At normal pool elevation, 533 feet above Mean Sea Level (MSL), the lake comprises 23,560 acres. An additional 20,136 acres of fee land extend above this pool. Recreation areas include ten parks operated by the USACE, one park operated by the Texas Parks and Wildlife Department, one park operated by Texas Department of Transportation, one park operated by Hill County, one park operated by the city of Whitney, one private yacht club, and three recreation areas operated by concessionaires. Approximately 13,600 acres of fee land are dedicated as natural areas, with only low impact public use permitted.

The clear water, scenic bluffs, a relatively mild climate, and excellent fishing, swimming, and boating opportunities attract many visitors each year. Also, because the Dallas/Fort Worth Metroplex is located within 60 miles of Whitney Lake, public visitation places a high demand on its recreational facilities.

The Brazos River above Whitney Lake has been recognized by various public and private agencies and organizations for its scenic beauty and its recreation potential. It has been listed by the National Park Service's

Nationwide Rivers Survey of 1995 as the Number 1 scenic and recreational river in northern half of Texas and by Water Skier's Magazine as one of Texas' Top 10 water skiing areas. The narrow, tree-lined channel and high bluffs offer protection from the wind even on the most blustery days and make this an extremely popular area for boating and fishing.

Ham Creek Park is located approximately 8 miles west of Rio Vista on F.M. 916 along the Brazos River arm of the northern portion of Whitney Lake in Precinct 1 in the southwestern corner of Johnson County, Texas (Figure 1). The park encompasses approximately 191 acres and is divided into two areas by Ham Creek. These areas are referred to as "east" and "west", in regards to their location relevant to Ham Creek, and are served by separate access roads off Farm to Market (FM) 916.

Ham Creek Park was constructed in the late 1950's and remained fully operational by USACE until the early 80's when the east side of the park was closed due to budget limitations. In 1984 the east side of the park was leased to Carswell Air Force Base as a recreational and instructional area for Air Force personnel. The lease was terminated and the east side of the park was closed again in 1990. The east side of the park contains a road, two restrooms, and a well house, all in various states of disrepair. The west side of the park contains a well house and a one-lane boat ramp, which remains open when lake levels are adequate for boat ramp launching.

The Whitney Lake Master Plan classifies Ham Creek Area into two land use categories, Recreational Area and Aesthetic and Multiple Use Recreation. The portion of the park on the north side of F.M. 916 and a 100-foot wide section immediately adjacent to the roadway on the south side of F.M. 916 until Ham Creek Tributary is classified as Aesthetic and Multiple Use Recreation. Aesthetic and Multiple Use Recreation is defined as areas set aside for management of resources for multiple recreation uses not requiring supporting facilities. The remaining park is classified as Recreation Area and is described as high intensity public use area with a variety of activities and supporting physical development.

Contiguous government property to Ham Creek Area is that which lies along the Brazos River arm of Whitney Lake on the east side of the park. Land along the Brazos River arm is classified as Special Use Area and includes low intensity public use with minimum physical developments and lands to be used by non-profit organizations or agencies for the purpose of rendering a public recreational/educational service of a charitable or character building nature on a non-exclusive basis. The contiguous government property is currently being utilized as wildlife management area.

Remaining lands surrounding Ham Creek Area are privately owned. A privately owned subdivision, Fisherman's Paradise, is found along the east side of the park. The Klondike Ranch, which is private property, is also found on the west side of the park along the Brazos River arm.

3.2 CLIMATE

The local climate is characterized by long, hot summers and short, mild winters. Average monthly temperatures for the area range from a winter low of about 33° F to a summer high of 96 °F. Average annual precipitation is approximately 33 inches. Heaviest rainfall occurs during February and March and lowest rainfall occurs from July through September.

3.3 GEOLOGY AND SOILS

According to the Soil Survey of Johnson County Texas, Ham Creek lies within the Bolar-Brackett-Aledo soil series. Most of the park lies within this series, however, when you leave the creek bottom and get out of the draws, the Oledo-Bolar series takes over.

Bolar-Brackett-Aledo

The Bolar-Brackett-Aledo series is strongly sloping to steep, very shallow to moderately deep, moderately alkaline loamy, stony, and gravelly soils on uplands. This map unit is dominantly made up of well drained soils that have

slopes of 8 to 60 %. This unit makes up about 5 percent of the county. It is about 23 percent Bolar soils, 20 percent Brackett soils, 8 % Aledo soils, and 49 % soils of minor extent.

The strongly sloping to steep Bolar Soils are on side slopes where they are mixed with narrow bands of Aledo soils. Bolar soils are well drained, and permeability is moderate. Typically, the surface layer is stony clay loam about 19 inches thick. The subsoil to a depth of 37 inches is clay loam that is brown in the upper part and pale yellow in the lower part. The underlying material is fractured limestone interbedded with calcareous marl.

The moderately steep to very steep Brackett soils are on side slopes. Brackett soils are well drained, and permeability is moderately slow. Typically, the surface layer is grayish brown loam about 8 inches thick. The layer below that to a depth of 14 inches is light brownish gray loam. The underlying material is interbedded limestone and light brownish gray loam.

The strongly sloping to steep Aledo Soils are on side slopes where they are mixed with narrow bands of Bolar soils. Aledo soils are well drained, and permeability is moderate. Typically, the surface layer is dark grayish brown gravelly clay loam about 6 inches thick. The layer below that to a depth of 18 inches is dark grayish brown very gravelly clay loam. The underlying material is coarsely fractured limestone.

The soils in this unit are best suited as rangeland. Native vegetation is mid and tall grasses and scattered live oak trees. These soils are moderately well suited to use as habitat for wildlife because the vegetation provides good cover and protection. The soils are poorly suited to use for pasture or crops because of stoniness, slope, shallow rooting depth, and susceptibility to water erosion.

Oledo-Bolar

The Oledo-Bolar soil series are gently sloping to strongly sloping, very shallow to moderately deep, moderately alkaline loamy soils, on uplands. This map unit is dominantly made up of well drained soils that have slopes of 1 to 12 percent. This unit makes up 21% of the county. It is about 43 % Aledo soils, 26 % Bolar soils, and 31% of minor extent.

The gently sloping to strongly sloping Aledo Soils are on ridgetops and on side slopes where they are mixed with narrow bands of Bolar soils. Aledo soils are well drained, and permeability is moderate. Typically, the surface layer is dark grayish brown clay loam about 5 inches thick. The next layer to a depth of 12 inches is grayish brown very gravelly clay loam. Coarsely fractured limestone is at a depth of 12 inches.

The gently sloping to strongly sloping Bolar Soils are on side slopes where they are mixed with narrow bands of Aledo soils. Bolar soils are well drained, and permeability is moderate. Typically, the surface layer is clay loam about 12 inches thick. It is dark grayish brown in the upper part and dark grayish brown in the lower part. The subsoil to a depth of 36 inches is clay loam that is grayish brown in the upper part and very pale brown in the lower part. The underlying material is fractured limestone interbedded with calcareous marl.

The soils in this unit are moderately well suited for rangeland. Native vegetation is mid and tall grasses and scattered live oak trees. These soils are moderately well suited to use as habitat for wildlife because the vegetation provides good cover and protection. The soils are not suited to use for pasture or crops because of stoniness, slope, the very shallow root zone, and droughtiness.

3.4 WATER RESOURCES

3.4.1 Waters of the U.S. including Wetlands

Section 10

USACE is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate *all work or structures in or affecting the course, condition or capacity of navigable waters of the United States.* The

Brazos River is considered navigable within the Fort Worth District from the point of intersection of Grimes, Walker, and Washington Counties upstream to Whitney Dam in Hill and Bosque Counties, Texas. Therefore, the Brazos River is not regulated by Section 10 upstream from Whitney Lake.

Section 404

The Brazos River arm of the upper portion of Whitney Lake bounds the southern portion of the park area. At normal pool elevation, 533 ft. MSL, approximately 2,400 feet of shoreline exists along the southern park boundary. At normal lake levels, the lake is approximately 300 ft. wide to the opposite shoreline and approximately 15 ft. deep at its deepest point adjacent to the park. During the past ten years, the lake levels generally fluctuated between 522 ft. MSL and 544 ft. MSL. During this same period, lowest lake levels normally occurred from November to January, averaging about 9 feet below normal and highest lake levels usually occurred from February to April, averaging about 1.3 feet above normal.

Ham Creek divides the park area into two parts. The creek derives its water from local surface runoff during rain events, and as such, the majority of the bed dries up during extended droughts. The streambed measures 5,100 ft. in length and ranges between 75 ft. wide as it enters the property and 175 ft. wide at the lake confluence.

On-site visits and consultation of National Wetland Inventory (NWI) maps found that no wetlands exist within park area. Therefore, Whitney Lake as well as Ham creek are the only aquatic features that should be considered Waters of the United States within the project area.

Congress directed USACE under Section 404 of the Clean Water Act (33 USC 1344) *to regulate the discharge of dredged and fill material into all waters of the United States including wetlands*. As such, activities that result in a discharge of dredged or fill material into the lake or Ham Creek would be regulated activities under Section 404 of the Clean Water Act. Furthermore, regulated activities under Section 404 of the Clean Water Act may be permitted by General Permit (such as Nationwide General Permits, Regional General Permits, or Programmatic General Permits) or Individual Permit (such as Standard Individual Permits or Letters of Permission). Based on the nature of this project it appears that the project may meet the terms and conditions associated with the Letter of Permission Procedure 1 (CESWF-97-LOP-1) for activities at certain reservoirs and Federal and state sponsored projects.

3.4.2 Water Quality

The draft 2004 Texas Water Quality Inventory, based upon data from March 3, 1998 to February 28, 2003 collected from Monitoring Station 11853 located at SH 174 Bridge crossing Whitney Lake, lists chloride as a public water supply concern and harmful algal blooms, including golden alga (Texas Commission on Environmental Quality 2005).

3.5 BIOLOGICAL RESOURCES

3.5.1 Wildlife and Fish

Whitney Lake is one of the premier fishing lakes in the state, renowned for its striped bass and white bass. The lake supports approximately 40 species of fish. The principal native and introduced gamefish species include largemouth bass (*Micropterus salmoides)*, striped bass (*Morone saxatilis)*, white bass (*Morone chrysops)*, smallmouth bass (*Micropterus dolomieui)*, white crappie (*Pomoxis annularis)*, black crappie (*Pomoxis nigromaculatus)*, channel catfish (*Ictalurus punctatus)*, blue catfish (*Ictalurus furcatus)*, flathead catfish (*Pilodictus olivaris)*, black bullhead (*Ameiurus melas)*, and yellow bullhead (*Ameiurus natalis)*. Various species of sunfish, shad, shiners, and minnows are also present.

Common mammal species include white-tailed deer (*Odocoileus virginianus)*, eastern cottontail (*Sylvilagus floridanus)*, swamp rabbit (*Sylvilagus aquaticus)*, fox squirrel (*Sciurus niger)*, opossum (*Didelphis virginiana)*, raccoon (*Procyon lotor)*, striped skunk (*Mephitis mephitis)*, gray fox (*Urocyon cinereoargenteus)*, coyote (*Canis latrans)*, and bobcat (*Felis rufus)*. Migratory waterfowl and resident birds within the Whitney Lake include nearly

300 species of ducks, geese, songbirds, wading birds, and shorebirds. Other wildlife present within Whitney Lake include various species of turtles, snakes, lizards, toads, frogs, and salamanders.

3.5.2 Aquatic Vegetation

Submergent aquatic vegetation in the project area is limited. Ham Creek is an ephemeral creek that flows for short durations during rain events, but is dry for most of the year. Vegetation in the Brazos River, along mudflats during low water periods, and along the banks include typical river plants including: Button bush (*Cephalanthus occidentalis*), switchgrass (*Panicum virgatum*), willow baccharis (*Baccharis, Sp*.), Indiangrass, (*Sorghastrum nutaus*), willow (*Salix Nigra),* giant ragweed (*Ambrosia trifida*), and cocklebur (*Xanthium strumarium*).

3.5.3 Terrestrial Vegetation

Figure 5 shows the vegetation classification of the park area. Table 1 shows the acreage of the vegetation types within the park area. The vegetation types are described below.

TABLE 1
Vegetation Acres

AREA	GRASSLAND	RIPARIAN WOODLAND	UPLAND WOODLAND	WATER
A	0	18	32	0
B	32	12	18	1
C	0	33	11	2

Grasslands: The area is generally vegetated with herbaceous species including Johnsongrass (*Sorghum halapense*), silver bluestem (*Bothriochola laguroides*), giant ragweed (*Ambrosia trifida*), Texas bluebonnet (*Lupinus texensis*) and goldenrod (*Solidago* sp.) Low shrubs, Virginia creeper, wild grape and green briar vines, along with small clusters of young elm, hackberry, and oak trees dot the interior. A mature juniper-oak complex occupies the fence line along northwestern boundary of this section, while a mix of mature pecan (*Carya* sp.), oak and elm trees line the river bank on the southern edge.

Riparian Woodlands: Ashe juniper (*Juniperus ashei*), black willow (*Salix Nigra*) and plateau oak (*Quercus fusiformis*) are the dominant tree species in the overstory. Other species occurring less frequently include Pecan, (*Carya illinoensis*), Texas oak (*Quercus buckleyi*), shin oak (*Quercus sinuata* var. *breviloba*), American sycamore (*Planatus occidentalis*), netleaf hackberry (*Celtis reticulate),* cedar elm (*Ulmus crassifolia*) and Texas ash (*Fraxinus texensis*). The canopy cover of the wooded upland areas ranges from 75-90%. The area is generally vegetated with herbaceous species including Indiangrass (*Sorghastrum nutans*), Johnsongrass (*Sorghum halapense*), silver bluestem (*Bothriochola laguroides*), giant ragweed (*Ambrosia trifida*), Texas bluebonnet (*Lupinus texensis*) and goldenrod (*Solidago* sp.) Low shrubs, Virginia creeper, wild grape and green briar vines, along with small clusters of young elm, hackberry, and oak trees dot the interior.

Upland Woodlands: The section is roughly 4200 feet in length and begins at FM 916, extending to confluence with the Brazos River and varying in width from 153 feet to 1080 feet at the widest point. The canyon slope along this section is vegetated with mature juniper/oak woodlands. Ashe juniper (*Juniperus ashei*) and plateau oak (*Quercus fusiformis*) are the dominant tree species in the overstory. Other species occurring less frequently include Pecan (*Carya illinoensis*), Texas oak (*Quercus buckleyi*), shin oak (*Quercus sinuata* var. *breviloba*), American sycamore (*Planatus occidentalis*), netleaf hackberry (*Celtis reticulate),* cedar elm (*Ulmus crassifolia*) and Texas ash (*Fraxinus texensis*). The canopy cover of the wooded upland areas ranges from 75-90%.

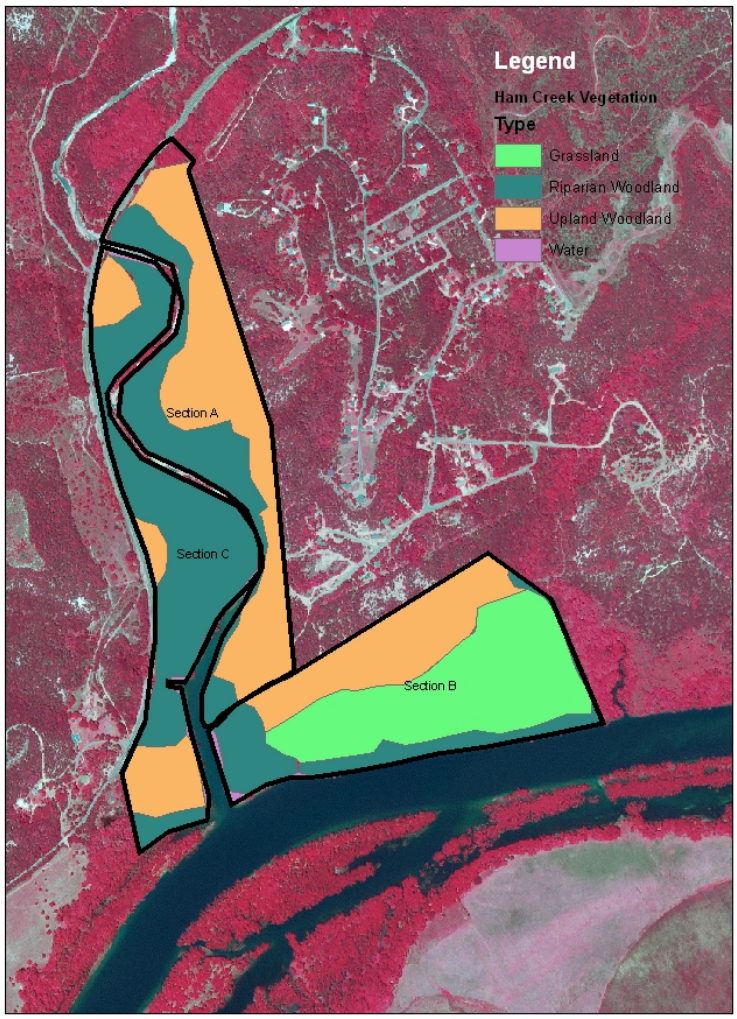


Figure 5: Ham Creek Park Vegetation

3.5.4 Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (PL 93-205) (ESA) requires Federal agencies to consult with the U.S. Fish and Wildlife Service (Service) in order to ensure projects do not jeopardize the continued existence of threatened and endangered species. Four Federally listed threatened and endangered species are listed by the Service for Johnson County. Table 2 shows the species and their status.

In addition to federally listed species, Texas Parks and Wildlife Department (TPWD) list species of concern by county. The full county list is located in Appendix B. Initial consultation with TPWD indicated that they had records of the Glen Rose yucca, Brazos water snake, a rookery, and golden cheeked warblers in the surrounding area. They also noted that there are potential impacts to aquatic species in the area. The list for Johnson County shows that the Brazos water snake (*Nerodia harteri*), sharpnose shiner (*Notropis oxyrhynchus*), smalleye shiner

(*Notropis buccula*), pistolgrip (*Tritogonia verrucosa*), rock-pocketbook (*Arcidens confragosus*), and Texas Fawnsfoot (*Truncilla macrodon*) have been documented in Johnson County.

The GCW are addressed below and will be addressed in the impacts section. No Glen Rose yuccas were documented in the immediate project area, and therefore, they would not be impacted. There were no indicators of a rookery within the park boundaries. The sharpenose shiner and the smalleye shiner could potentially occur in the area; however, any construction alternative would only impact a small insignificant amount of the water and water frontage, and therefore, should not impact these species. The Brazos water snake has been documented in Johnson County; however, the immediate project area is mainly comprised of mud banks with a sediment bottom and the Brazos water snake prefers shallow water with rocky bottoms and rocky portions of the bank. Since this type of habitat is not present the project is not expected to affect the Brazos water snake.

The Brazos River in the project location should not be conducive for the pistolgrip, rock-pocketbook, and Texas fawnsfoot. These species are river species. The project area is under the influence of Whitney Lake and the Brazos River here has a substantial amount of sediment. None of the species are tolerant of lake systems. Only the Texas fawnsfoot is endemic to the Brazos River basin and little is know about this species and it is intolerant of lake settings. Therefore, no impacts to these species are expected as a result of this project.

TABLE 2
Threatened and Endangered Species Johnson County, Texas

SPECIES	SCIENTIFIC NAME	STATUS
bald eagle	*Haliaeetus leucocephalus*	Threatened
black-capped vireo	*Vireo atricapillus*	Endangered
golden-cheeked warbler	*Dendroica chrysoparia*	Endangered
whooping crane	*Grus americana*	Endangered

Bald Eagle and Whooping Crane

The bald eagle has been reported at various locations at Whitney Lake, but none within or adjacent to the park have been reported. Habitat within the park and along the shoreline is not considered preferred habitat for either the whooping crane or bald eagle, although it is possible that the bald eagle could potentially utilize some trees along the shoreline for perching.

Black-capped Vireo

The black-capped vireo (BCV) is a migratory bird found within the region during breeding season, March through August. Its breeding habitat consists of scrubby growth of irregular height distribution comprised of mostly deciduous shrubs, especially oaks and sumac. Vegetation must reach the ground and contain open spaces. Frequently this habitat is found along eroded slopes, gullies, or ravines (Audubon Watchlist).

A habitat assessment of the entire government property surrounding Whitney Lake was conducted in 1996 and found marginal amounts of BCV habitat. BCV breeding surveys conducted over three years, 1996-1998, upon a combined total of 2,645 acres observed three BCVs, none within Ham Creek Park. Data for positive sightings in Ham Creek Park by other agencies or individuals was not available during the preparation of this EA. A site visit conducted by USACE and Service personnel on August 4, 2005 verified the lack of suitable BCV habitat within the park.

Golden-cheeked Warbler

The GCW is a migratory songbird present in the region only during the breeding season, March through early August. Its habitat is described as mature juniper-oak woodlands, with 50 percent or greater canopy cover. The warbler requires the bark of older Ashe juniper (*Juniperus ashei*) for its nesting material.

The habitat assessment conducted in 1996 found approximately 2,800 acres of suitable GCW within the entire government property surrounding Whitney Lake. Ham Creek Park was determined to possess approximately 60 acres of marginally suitable habitat for the GCW. GCW breeding surveys conducted from 1996 through 1998, upon

a combined total of 2,645 acres yielded the presence of forty-one (41) GCWs. One was observed in Ham Creek Park. On April 24, 2004, Dr. Michael Guilfoyle and Ranger Sam Masters saw one bird and heard at least two others on USACE property approximately 1200 yards north of the proposed park development area. On March 30, 2005 – one GCW was banded by Denise Lindsay, University of Louisiana at Lafayette, during a sampling study. It was determined by Service and USACE personnel during a park visit on August 4, 2005 that suitable GCW habitat is still present within the park. Additionally, a known GCW colony is present on adjacent private property at the Klondike Ranch less than 2 miles away from the entrance to the park, as documented by a survey conducted in 2002 by The Nature Conservancy. Although few GCWs have been recorded within the park since 1998, there is a strong possibility of the existence of GCWs within the park due to favorable habitat presence and the proximity to a known GCW colony on adjacent private property.

Due to the fact that GCWs have been sited and there is potential habitat in Sections A and B of the park area, a biological assessment was completed and USACE entered into formal Section 7 consultation with the Service on November 7, 2005. In addition to potential GCW habitat within the park area, there is known habitat for the GCW in other areas on Federal property at Whitney Lake.

3.6 NOISE AND GENERAL AESTHETICS

The park offers a picturesque setting with Whitney Lake, a riparian woodland, and a bluff vegetated with oaks and junipers. The park area is generally very quiet for the most part, with exceptions of passing boats within the lake and vehicular traffic on adjacent roadway. Typically, weekends create more noise than weekdays due to increased visitation and traffic. Illegal ATV operation within the park generates considerable noise at times.

3.7 CULTURAL RESOURCES

The park area contains two recorded sites, Sites 41JN6 and 41JN7, recorded by Southern Methodist University in 1971 during a survey of the Whitney Lake shoreline. Both sites were described as small lithic scatters. Cultural resources investigations included a pedestrian survey with shovel testing of areas proposed for new construction and the evaluation of two previously recorded archeological sites (41JN6 and 41JN7) located within Ham Creek Park. Shovel testing at both sites failed to recover subsurface artifacts. Neither site is considered eligible for the National Register of Historic Places. No additional cultural resources were identified during the present survey.

3.8 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTES

A review of historical records and literature searches revealed no known hazardous, toxic, and radioactive wastes to occur within the park area. On-site investigations visits did not reveal potential hazardous, toxic, or radioactive wastes.

3.9 AIR QUALITY

Air quality is defined by ambient air concentration of specific pollutants determined to be of concern with respect to the health and welfare of the general public. Under the Clean Air Act Amendments of 1990, the EPA established National Ambient Air Quality Standards (NAAQS), including six "criteria pollutants:" lead, ozone, sulfur dioxide, oxides of nitrogen, carbon monoxide, and particulate matter less than 10 microns in diameter (PM10). Areas that exceed a Federal air quality standard are designated as non-attainment areas.

Johnson County is classified by U.S. Environmental Protection Agency (EPA) as one of 23 nonattainment counties in Texas in 2005. The monitoring station located in Cleburne, 12 miles northeast, recorded ozone as the main pollutant within Johnson County. The 8-hour average concentration of ozone was 0.09 ppm, exceeding the primary standard of 0.08 ppm (EPA 2005).

3.10 RECREATION

Whitney Lake received nearly 1 million visitors in Fiscal Year 2004 (OMBIL 2005). The nearest parks include Plowman Creek Park, 18 miles from Ham Creek Park, and Kimball Bend Park, 15 miles from Ham Creek Park, both

operated by USACE. In Fiscal Year 2004, Plowman Creek, a 189-acre park with 34 campsites, a day-use area and two-lane boat ramp, received approximately 17,000 visitors (USACE 2006). Kimball Bend, a 129-acre park with 11 campsites, a day-use area and two-lane boat ramp, received approximately 28,000 visitors (USACE 2006). Popular recreational activities include camping, picnicking, boating, fishing and sightseeing. As is true of all the parks at Whitney Lake, Kimball Bend and Plowman Creek Parks routinely reach maximum capacity during weekends over spring and summer months, especially during holiday weekends. The parks also receive high visitation during fall weekends early in hunting seasons.

In April 2002, the Fort Worth District established a Water Related Recreation Use Policy for Fort Worth District Lakes. The purpose of the policy was to establish maximum boat carrying capacities for all lakes within the Fort Worth District. The policy established a goal of 22 acres of water per boat during peak use times as the District's standard for resource protection and user enjoyment. Whitney Lake has a current estimated carrying capacity of 38.2 acres of water per boat, well under the district minimum of 22 acres of water per boat.

3.11 SOCIOECONOMICS

Johnson County encompasses 730 square miles with a population of 126,811 in 2000, comprised of 90 percent white, 2.5 percent black or African American and the remainder American Indian, Asian, or other races. The average household size was 2.85 and average family size was 3.2 in 2000. In 2000, median household income was $44,621 and 8.8 percent of the individuals were below poverty level (US Census Bureau 2005). Dominate industries within the county include manufacturing, retail trade, construction, and educational, health and social services.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 PROJECT SETTING & LAND USE

No Action

The park area would remain in its current state and there would not be any change in land use. Area would continue to receive little public recreation use. Boaters would utilize boat ramp only with adequate lake levels, about 5 months per year, and foot access to areas closed to vehicular traffic would also continue. Illegal ATV operation would likely remain at current or increased levels, further damaging the natural resources within the park area.

Construction Alternatives

Land use within the park area would remain the same, although the park area would be utilized as a high intensity, multi-use recreational area, serving both day users and campers. As such, park area would become more intensively operated and managed and illegal ATV operation within the park would discontinue. In addition, certain areas within the high intensity recreation use, shown on Figure 6, would be classified as "no build zones" after construction of project recreation features in order to protect GCW habitat.

Figure 6: Designated "No Build Zones"
after Construction of Project Features

4.2 GEOLOGY AND SOILS

No Action

Some direct and indirect upon geology and soils would likely continue. It is assumed that illegal ATV operation within the study area would remain at similar or increased levels within all park areas except steep slopes. Soils would be lost to erosion and rocks displaced due to continued illegal ATV operation. Illegal dumping of unknown substances and materials may also occur.

Alternative 1 (Proposed Action)

Construction activities would involve only minor soil disturbance. The only roadways requiring construction are those to accommodate the gate entrance complex. Very few trees and underbrushing is required for construction of campsites as RV campsites would be contained predominately within grassland area. Only minor underbrushing would be performed for construction of primitive campsites and trails. The boat ramp would require large amounts of cut and fill to establish the boat ramp parking and turnaround areas. The turnaround and parking would be located above the conservation pool of the lake.

Appropriate measures to reduce impacts would be performed. A stormwater pollution prevention plan using best management practices would be implemented prior to construction to minimize erosion and runoff as a result of construction activities. Silt fencing and/or erosion control fabric would be utilized as appropriate, and disturbed areas would be graded to original contours as appropriate and seeded with native vegetation as required. Hazardous substances such as fuel, oil, grease, and other petroleum products associated with construction equipment may potentially leak onto soils. Hazardous spill prevention plans would be utilized throughout construction to minimize impacts of hazardous substances. There could be additional erosion to the banks from increased boat traffic in the area due to the construction of the new boat ramp. It is expected that boat traffic would not substantially increase from current use, but the area could be used more, since they would not have to travel as far by boat. Lake levels are normally lower in summer months during the peak use of the area, so impacts to the normal bank would still be minimal.

Alternative 2

Potential impacts would be less than those of Alternative 1 because the construction would occur predominately on previously disturbed land.

Alternative 3

Potential impacts would be similar to those of Alternative 1 above, but potential exists for additional impacts as a result of construction of the low-water crossing. As compared to Alternative 1, constructing the 100-foot long low-water crossing and associated roadway between Sections A and C, would disturb an estimated additional 0.4 acre of previously undisturbed land. The slope of the land adjacent to and surrounding the low-water crossing would also create an increased potential for erosion.

Alternative 4

Potential impacts would be similar to those of Alternative 1 above, but with a greater potential for additional impacts as a result of additional construction required. As compared to Alternative 1, constructing the 300 foot long low-water crossing and associated roadway between Sections A and C, the roadway serving the RV campsite loop in Section C, RV campsites within Section C and the gate entrance complex, would disturb an estimated additional 8 acres of undisturbed land. The slope of the land adjacent to and surrounding the low-water crossing would also create an increased potential for erosion.

4.3 WATER RESOURCES

4.3.1 Waters of the US including Wetlands

Section 404

No Action

It is assumed that illegal ATV operation within the study area would remain at similar or increased levels within all park areas which would continue to degrade creek and river bottoms. The banks would continue to erode.

Alternative 1 (Proposed Action)

Construction would comply with the stormwater pollution prevention plan as required by the Texas Pollution Discharge Elimination System (TPDES) general permit for construction activities. The construction activities would impact approximately 1.7 acres of open water by dredging to increase the use of the boat ramp during periods of low water conditions (Approximately 6 months out of the year). Approximately 30,000 cubic yards of materials would be removed. An additional 50 feet of bank would be impacted by constructing the boat ramp. Approximately 50 cubic yards of materials would be removed from construction of the boat ramp and approximately 50 cubic yards of materials would be installed as fill in the form of rip rap. Approximately 0.08 acres of Waters of the U.S. would be impacted from boat ramp construction, which is already included in the 1.7 acres of impacts. Plan views of the boat ramp are included in Appendix A. In addition, figures showing impacted Waters of the U.S. are shown in Appendix A. Minor, insignificant temporary adverse impacts from increased turbidity within Ham Creek and the

Brazos River would occur while the materials were being excavated. A backhoe or track hoe would be used and the dredge materials would be placed in a dump truck and disposed of on upland sites and used in park construction areas in order to prevent impacts. Erosion control measures would be performed throughout construction to reduce potential impacts. Potential also exists that hazardous substances may be discharged into surface water, such as fuel, oil, grease, and other petroleum products associated with construction equipment; however, best management practices would be implemented to reduce chances for impacts. The boat ramp by itself would comply with Regional General Permit CESWF-02-RGP-8 (RGP-8); however, due to the additional dredging, this alternative would comply with Letter of Permission CESWF-97-LOP-1 (LOP-1) Appendix C).

Alternative 2

Potential impacts would be similar to those of Alternative 1. The boat ramp and dredging would comply with LOP-1.

Alternative 3

The boat ramp construction and dredging would be the same as Alternative 1 and would comply with LOP-1. In addition, Alternative 3 would result in .4 acres of impacts of stream bed, associated with construction the low-water crossing on Ham Creek. Construction of the low water crossing would result in approximately 8,000 cubic yards of fill. The low water crossing would comply with Nationwide Permit 14 (NWP-14).

Alternative 4

The boat ramp construction and dredging would be the same as Alternative 1 and would comply with LOP-1. Potential impacts from the low water crossing would be similar to those of Alternative 3, but with additional impacts because the low water crossing would be much larger. It is estimated that approximately .8 acres of stream bed would be impacted with the construction of the low water crossing. Approximately 12,000 cubic yards of fill would be in Ham Creek as a result of the low water crossing, but the crossing would still comply with NWP-14. In addition, approximately 2-4 acres of river bottom would be excavated on the shoreline of Section C using a backhoe or track hoe to allow for additional water access from the camping sites (Approximately 100,000 cubic yards of materials). Although this activity would impact water of the US, no permit would be required because the project would be constructed by excavation only and would be done by loading the dredge materials into a dump truck and removed from the project site to avoid impacts. No bull dozers would be used during construction of the dredged areas.

4.3.2 Water Quality

No Action

It is assumed that illegal ATV operation within the study area would continue within all park areas except steep slopes. Frequent ATV operation within the park area would continue to increase erosion. The run-off from these eroded areas would decrease water quality by increasing turbidity and sediment transport. Illegal dumping could also occur, introducing unknown substances and debris into the waters within the park area.

Alternative 1 (Proposed Action)

Alternative 1 would result in minor, insignificant temporary adverse impacts from increased turbidity and sediment transport within Ham Creek and the Brazos River during excavation and boat ramp construction. A backhoe or track hoe would be used and the dredge materials would be placed in a dump truck and disposed of on upland sites in order to prevent impacts. Erosion control measures would be utilized throughout construction to reduce potential impacts. Potential also exists that hazardous substances may be discharged into surface water, such as fuel, oil, grease, and other petroleum products associated with construction equipment; however, best management practices would be implemented to reduce chances for impacts. Construction activities would comply with the stormwater prevention and hazardous spill prevention plans as required by the Texas Pollution Discharge Elimination System (TPDES) to reduce potential impacts and insure these impacts would be temporary and reduced to minor and less than significant.

Alternative 2

Impacts from implementing Alternative 2 would be similar to Alternative 1.

Alternative 3

Potential impacts would be similar to those of Alternative 1, but with greater potential for additional impacts upon water quality because of the increased ground disturbance area, .4 acres, associated with construction the low-water crossing. Although the quantity of disturbed area is only slightly greater than Alternative 1, the potential impact is greater because the construction would take place within and adjacent to Ham Creek. The low water crossing would serve as a depository for sediment on the upstream side and minor increases in scour and erosion would be expected downstream. Culverts would be placed under the low water crossing in order to pass low flows.

Alternative 4

Potential impacts would be similar to those of Alternative 3, but with a greater potential for additional impacts upon water quality because of the increased ground disturbance in areas that have not been previously disturbed, 8 acres. Similar to Alternative 3, Alternative 4 includes construction of a low-water crossing, one much larger than Alternative 3, and the potential impact is greatly increased because the construction would take place within and adjacent to Ham Creek. Increased deposition upstream and scour and erosion would be expected. In addition, water quality would be impacted by the dredging of an additional 2-4 acres of river bottom in front of Section C.

4.4 BIOLOGICAL RESOURCES

4.4.1 Fish and Wildlife

No Action

It is assumed that illegal ATV operation would continue. Some wildlife would be directly impacted by the disturbance of ATV operation within the park area. The direct and indirect impact of ATV operation within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions.

Alternative 1 (Proposed Action)

Wildlife species located within the footprints of the facilities would be impacted temporarily during construction and would likely inhabit adjacent suitable habitat during construction and return upon construction completion. The direct loss of some habitat could have minor impacts on wildlife species in the immediate vicinity of the park area. Increased vegetative diversity would likely result in the park area being utilized by additional wildlife species. Sedentary species located within the project footprint would be lost; however, this is would involve few species and would be determined to be insignificant. The direct and indirect impact of recreational facilities and increased human presence within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions. These impacts are expected to be minimal.

Alternative 2

Wildlife species located within the footprints of the facilities would be impacted temporarily during construction and would likely inhabit adjacent suitable habitat during construction and return upon construction completion. The direct loss of some habitat could have minor impacts on wildlife species in the immediate vicinity of the park area. Increased vegetative diversity would likely result in the park area being utilized by additional wildlife species. Sedentary species located within the project footprint would be lost; however, this is would involve few species and would be determined to be insignificant. The direct and indirect impact of recreational facilities and increased human presence within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions. These impacts are expected to be minimal.

Alternative 3

Wildlife species located within the footprints of the facilities would be impacted temporarily during construction and would likely inhabit adjacent suitable habitat during construction and return upon construction completion. The direct loss of some habitat could have minor impacts on wildlife species in the immediate vicinity of the park area. Increased vegetative diversity would likely result in the park area being utilized by additional wildlife species. Sedentary species located within the project footprint would be lost; however, this is would involve few species and would be determined to be insignificant. The direct and indirect impact of recreational facilities and increased human presence within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions. These impacts are expected to be minimal.

Alternative 4

Wildlife species located within the footprints of the facilities would be impacted temporarily during construction and would likely inhabit adjacent suitable habitat during construction and return upon construction completion. Impacts as a result of the direct loss of some habitat would be greater for this alternative because of the additional 8 acres of impact. These impacts could have minor impacts on wildlife species in the immediate vicinity of the park area; however, these impacts would be minimal. Increased vegetative diversity would likely result in the park area being utilized by additional wildlife species. Sedentary species located within the project footprint would be lost; however, this is would involve few species and would be determined to be insignificant. The direct and indirect impact of recreational facilities and increased human presence within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions. These impacts are expected to be minimal.

4.4.2 Aquatic Vegetation

No Action

It is assumed that illegal ATV operation within the study area would continue. ATVs frequent low areas along and within the lake and creek, impacting aquatic vegetation through physical destruction, decreased water quality and disturbance of seed bed. Run-off from eroded ATV areas decreases water quality and increase sediment deposition within the lake and creek. Aquatic organisms are impacted by the loss of aquatic vegetation, decreased water quality and the physical disturbance within the water and along the streambed.

Alternative 1 (Proposed Action)

Because Alternative 1 involves dredging at the boat ramp location and construction adjacent to surface waters, there is some potential for minor, temporary adverse impacts from increased turbidity, sediment deposition, and hazardous material spills within Ham Creek and Whitney Lake which would impact aquatic communities. Some aquatic organisms would locate to adjacent suitable habitat during construction. Construction activities would comply with the stormwater prevention and hazardous spill prevention plans as required by the Texas Pollution Discharge Elimination System (TPDES) to reduce potential impacts and insure these impacts would be temporary and reduced to minor and less than significant. To limit impacts to existing aquatic communities, dredging activities would occur at a time other than the spring spawning season when fish and wildlife are more vulnerable to disturbances in the environment. Overall, the net effect upon aquatic communities is expected to be minor. No impacts to threatened and endangered species are anticipated.

Alternative 2

Potential impacts would be similar to those of Alternative 1 above. A slightly greater potential for additional impacts upon aquatic communities does exist because of the increased ground disturbance area, .75 acres, associated with the gate entrance complex.

Alternative 3

Potential impacts would be similar to those of Alternative 1, but with greater potential for additional impacts upon aquatic communities because of the increased ground disturbance area, .4 acres, associated with construction of the gate entrance complex and the low-water crossing. Although the quantity of disturbed area is only slightly greater than Alternative 1, the potential impact is increased because the construction would take place within and adjacent to Ham Creek.

Alternative 4

Potential impacts would be similar to those of Alternative 1, but with a greater potential for additional impacts upon aquatic communities because of the increased ground disturbance, 8 acres and an additional 2-4 acres of dredging. Similar to Alternative 3, Alternative 4 includes construction of a low-water crossing, although significantly longer, and the potential impact is increased because the construction would take place within and adjacent to Ham Creek.

4.4.3 Terrestrial Vegetation

No Action

It is assumed that illegal ATV operation within the study area would continue. ATV operation can result in physical damage to vegetation through direct contact with vehicle. With continued use of trails, soil compaction and erosion may also damage vegetation. Damaged vegetation impacts associated wildlife through altered habitat.

Alternative 1 (Proposed Action)

Grasslands: Construction within Section B would result in the direct loss of some grassland from construction of recreation facilities such as camping sites, and group shelters. The remaining grassland within Section B would be maintained as grassy vegetation through periodic mowing. Vegetative diversity would be increased by planting/reseeding wildflower, grass and forbs mixes in areas disturbed by construction activities. It is estimated that approximately all of the 32 acres of grasslands would be affected; however, there would only be direct losses of approximately 5 acres.

Riparian Woodlands: The location of the boat ramp facilities would be located in areas to minimize impacts to existing mature woody vegetation. However, the construction of the boat ramp parking, turn around and the boat ramp itself will result in the unavoidable loss of riparian woodlands. Approximately 2.4 acres of riparian woodlands would be lost.

Upland Woodlands: The location of facilities would be determined by presence of woody vegetation, specifically trees, to limit impacts. Whenever possible, facilities would be located so as to preserve the greatest number of desirable trees. Approximately 2 acres of upland woodland would be lost for the gate entrance complex in Section A. Approximately 1.25 acre of upland woodland would be lost from the construction of roadways within Section A. Only a minor amount of underbrushing would be required for construction of primitive campsites and trails. A total of approximately 3.25 acres of upland woodlands would be lost from construction of Alternative 1.

Alternative 2

Potential impacts would be similar to those of Alternative 1 above; however, an additional .75 acres of upland woodland would be as a result of the construction of the gate entrance complex in Section A.

Alternative 3

Potential impacts would be similar to those of Alternative 1 above, but a slightly greater potential impact to the terrestrial community exists as a result of the removal of additional .4 acres of riparian woodland associated with construction of the low-water crossing and associated roadway in Section A.

Alternative 4

Grasslands: Construction within Section B would result in the direct loss of some grassland from construction of recreation facilities such as day use picnic sites and group shelters. The remaining grassland within Section B would be maintained as grassy vegetation through periodic mowing. Vegetative diversity would be increased by planting/reseeding wildflower, grass and forb mixes in areas disturbed by construction activities. It is estimated that approximately 2 acres of grasslands would be affected.

Riparian Woodlands: The location of the boat ramp facilities would be determined by the presence of mature woody vegetation. However, the construction of the boat ramp parking, turn around and the boat ramp itself will result in the unavoidable loss of riparian woodlands. Approximately 2.4 acres of riparian woodlands would be lost from boat ramp construction. In addition, approximately 2 acres would be lost from the gatehouse construction, 1 acre for roads, and 1 acre for campgrounds in Section C. Approximately .6 acres would be lost from the construction of the low water crossing. The total amount of riparian woodlands lost from the construction would be approximately 7 acres.

Upland Woodlands: The location of facilities would be determined by presence of woody vegetation, specifically trees, to limit impacts. Whenever possible, facilities would be located so as to preserve the greatest number of desirable trees. Approximately 3 acres of upland woodland would be lost from the construction of the campground within Section C. Approximately .4 acres would be lost from the construction of the roads in Section A. Only a minor amount of underbrushing would be required for construction of primitive campsites and trails. A total of approximately 3.4 acres of upland woodlands would be lost from construction of Alternative 4.

4.4.4 Threatened and Endangered Species

No Action

The whooping crane, bald eagle and BCV have not been reported within Ham Creek Park. Due to the nature and scope of the project and habitat types present within the park, it is anticipated that the park development would have no effect on either, the whooping crane, bald eagle or BCV.

GCWs habitat exist, sightings have been confirmed within the park and conditions within the park area would remain the same. It is assumed that illegal ATV operation within the study area would continue. Increased frequency of ATV operation may create disturbances for the GCW.

Alternative 1 (Proposed Action)

GCWs sightings have been confirmed in the park and suitable habitat exists. USACE entered into formal Section 7 consultation with the Service regarding the effects of the proposed plan on the GCW. The Service issued a Biological Opinion (Appendix B) that determined the project would destroy 8.5 acres of habitat and would cause harassment on 109 acres of habitat. The Service determined that a total of 117.5 acres would be authorized as incidental take under Section 9 of the ESA and that the level of anticipated habitat take is not likely to jeopardize the continued existence of the GCW. Actual direct impacts are expected to be less than the 8.5 acres.

The following reasonable and prudent measures would be implemented as recommended by Service in the Biological Opinion:

1. Clearing of GCW habitat for perimeter fence construction would be conducted outside of GCW breeding and nesting season (September through February) and would be no wider than 8 feet.
2. No-build Zones would be clearly marked prior to any construction to prevent accidental clearing by work crews. No-build Zones would be managed as GCW habitat. Buffer areas between the facilities and the No-build Zones would be planted and/or maintained as native vegetation.
3. Trails within No-build Zones would be designed as no hard surfaces, minimal vegetation removal, and would be constructed and maintained outside of BCW breeding and nesting season.
4. Impacts related to lighting generated by the facilities would be minimized by the use of directional lighting and buffers around BCW habitat.

5. USACE would develop an appropriate monitoring plan for reporting progress in development of the property and implementation of the reasonable and prudent measures.

USACE would follow all terms and conditions reflected in the final Biological Opinion. Additional Conservation recommendations for the GCW would be followed as funding allows. Funding would be requested annually to foster implementation of conservation recommendations. If during construction, it is anticipated that direct or indirect impacts are approaching the specified limits and it is anticipated that they may exceed the limits, then construction would cease and consultation would be reinitiated as directed by the Biological Opinion.

Alternative 2 and 3

Potential impacts would be similar to those of Alternative 1 above.

Alternative 4

Potential impacts would be similar to Alternative 1; but it would be expected that less direct impact to habitat would occur even though more direct impact to existing vegetation would occur as a result of Alternative 4. This alternative would construct the gate complex in Section C, where limited habitat exists. The resulting total take would however be approximately the same amount of acreage due to the take by harassment.

4.5 NOISE AND GENERAL AESTHETICS

No Action

Park area would remain in its current state and area would continue to receive little public recreation use. The only noise generated would be that of vehicles traveling the boat ramp roadway and during boat operation. Noise would also be generated through illegal ATV operation at current or increased levels within the park area.

Alternative 1 (Proposed Action)

During construction, noise would result during utilization of construction equipment. Equipment would include bulldozers, motor graders, dump trucks, water trucks, concrete trucks, loaders, back hoes, track hoes, trenchers, rollers, compactors, lay down machines, air compressors, power generators, arc-welders, chainsaws, air guns, power tools, and similar equipment. Hours of operation of construction equipment may vary, but would occur between 8:00 am and 5:00 pm weekdays, with minimum weekend work.

Normal park operation and maintenance activities would also generate noise on an occasional basis. Areas along roadsides and around all facilities would be mowed as growth necessitates. During growing season, park facility areas would usually be mowed every two to three weeks and roadsides about every four weeks, all dependent upon rainfall and funding. Refuse receptacles would be collected in refuse trucks once per week. Pressure washers may be utilized cleaning tables and restrooms once per week.

Visitation of the completed park is anticipated to be fairly high, particularly during the spring and summer months. Noise generated from normal recreation activities would be expected and may include operation of vehicles, boats, personal watercraft, radios, televisions, and other noises associated with outdoor recreational activities. Established park quite hours would be from 10:00 p.m. to 6:00 a.m. in order to help reduce noise impacts during night hours.

Noise-sensitive receptors are those locations where activities that could be affected by increased noise levels and include locations such as residences, motels, churches, schools, parks, and libraries. Existing noise levels are determined for the outdoor living area at sensitive receptors. There would be buffers to help reduce noise impacts from Ham Creek Park; however, it would be expected that residences located adjacent to the park would experience recreation related noises during normal park hours.

Residences currently enjoy a picturesque view of the Brazos River with fairly hidden remnants of existing dilapidated recreational facilities. This view would be interrupted slightly by placing recreational facilities in Section B. The recreational vehicle sites would be placed within existing tree lines to minimize these visual impacts on the aesthetics of the river. However, the underbrushing of the area would open the area and would increase the scenic beauty of the river to some people.

Alternatives 2, 3, 4

Potential impacts would be similar to those of Alternative 1 above. Alternative 4 would offset some of the recreational related noise of the camping public by locating them to Section C. However, with the outlay of the land and the residential communities being at a higher elevation, it would more than likely be possible for the sounds to be heard, especially with prevailing winds. Alternative 4 would also reduce some of the direct visual obstructions by placing the recreational vehicle camping facilities in Section C, which would be further to the west.

4.6 CULTURAL RESOURCES

No Action

Cultural resources within the park area would likely remain in similar condition, unless erosion occurred within or adjacent to the cultural resources location.

Alternatives 1, 2, 3 and 4

Proposed new construction is confined primarily to areas disturbed by the original construction and operation of the park. Based upon cultural resources investigations, it was determined that no historic properties would be affected by the proposed construction at Ham Creek Park. This determination currently is being coordinated with the Texas State Historic Preservation Officer (SHPO). If during construction archeological resources are discovered, construction would cease and accidental discovery procedures would be implemented in accordance with the Federal, state and local laws.

4.7 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTES (HTRW)

No Action

There are currently no-known hazardous, toxic, or radioactive wastes in the project area and therefore no impacts would result of the No Action Alternative.

Alternatives 1, 2, 3 and 4

No hazardous sites were found within or adjacent to the park area. If hazardous materials were encountered during construction, all construction activities in the immediate area would cease and accidental discovery procedures would be implemented in accordance with all applicable federal, state, and local environmental laws and regulations.

4.8 AIR QUALITY

No Action

No direct or indirect impacts to air quality would occur.

Alternatives 1, 2, 3 and 4

All construction alternatives would result in increase air pollution from construction equipment. Best management practices would be implemented to the extent practical to reduce dust particles from entering the air. All exhaust discharges would be localized and would be considered insignificant.

4.9 RECREATION

No Action

Park visitors would continue to have extremely limited access to a minimally operated park. Existing facilities (road, boat ramp, wellhouse, and three restrooms) would remain in various states of disrepair and deterioration. Park visitors could only utilize the boat ramp when lake levels are adequate for launching. The remaining portion of

the park would remain closed to vehicles and access could only be gained by foot. Restrooms and running water would remain unavailable. Kimball Bend and Plowman Creek Parks would continue to experience excessive visitation during spring and summer months.

Alternative 1, 2, 3 and 4

It is estimated that 20,000 vehicles would enter the park annually, bringing an estimated 40,000 visitors. Heaviest visitation, approximately 85 percent of the annual visitation, should occur from the beginning of March through the end of July. May is anticipated to receive the highest visitation. About 80 percent of the weekly visitation occurs over weekends. It is expected that all campsites, picnic sites, group shelters and the boat ramp would be fully utilized on holiday weekends including Easter, Memorial Day, Independence Day and Labor Day. It is estimated that an occupied campsite would have 3.6 persons utilizing the campsite and 1.5 persons per vehicle for day use boat. Alternatives 1 and 2 would increase the total potential acres of water per boat from 38.2 to 35.4 acres of water per boat with the construction of 50 additional boat ramp parking spaces. Alternatives 3 and 4 would increase the total potential acres of water to 36.5 acres of water per boat with the construction of 30 additional boat ramp parking spaces. Any of the alternatives would be well under the district minimum of 22 acres of water per boat. There would be an increased safety risk if boat traffic were actually increased in this area due to the concentration of boats in the narrow river corridor.

4.10 SOCIOECONOMICS

No Action

Local users of the boat ramp would continue to have to drive further to access ramps that are usable.

Alternatives 1, 2, 3 and 4

Construction of the project would not disproportionately affect any low income or minority populations. Johnson County residents would receive socioeconomic benefits by providing additional access to the lake and increased recreational opportunities. It is anticipated that no negative economic impact would be realized at lake facilities operated by others, unless local users stop storing their boats at local marinas as a result of the dependable boat ramp. These include Indian Lakes and Chisholm Trail Park.

5.0 MITIGATION FOR THE PROPOSED ACTION

The proposed action would impact approximately 2.4 acres of riparian woodlands, 3.25 acres of upland woodlands, and 32 acres of grasslands. All of these impacts would not require mitigation. Impacts as a result of normal operations and maintenance would not have to be mitigated. These include losses for road maintenance and perimeter fence maintenance. The grasslands impacted would be self mitigated as any disturbed area would be re-seeded with a wildflower, grass, forb mix. The entire grassland should actually benefit from the reintroduction of the native mix.

The riparian woodlands mentioned above would require mitigation as a result of the construction of the new boat ramp. This mitigation would be performed by expanding the riparian zone adjacent to the picnic sites in Section B using 3-6 inch caliper trees from the impacted area. The trees would be removed by spade and transplanted to those areas. Approximately 20 trees per acre would be planted. In addition, a woodland seed mix comprised of grasses and forbs would be planted in the mitigation areas. Existing woody vegetation would be avoided to the extent possible during construction. In addition, to the expanding the riparian zone in Section B, the riparian zone in Section C would be improved to increase the habitat value of that area. Additional plants and/or trees would be planted as required. Assuming worst case scenario, approximately 3 acres would be planted and any additional requirements would be mitigated by improving remaining riparian woodlands.

Approximately 2 acres of upland woodlands would be lost from the construction of gatehouse complex. This would be mitigated by improving the habitat in the remaining upland woodlands to improve habitat for the GCWs and other species as recommended by the Service.

Mitigation plans would be revised after the construction is finished and actual damages are estimated.

6.0 CUMULATIVE IMPACTS

This cumulative impact section only addresses the cumulative impacts of the proposed action. However, as the alternatives have very similar direct and indirect impacts, the cumulative impact would be very close to the same for each of the other construction alternatives.

Past Actions:

Past Actions in the immediate vicinity of the project area include the Construction of Whitney Lake and associated recreation facilities, the construction of and closure of Ham Creek Park as a recreation facility, the construction of F.M. 916, Construction of large residential subdivisions, and other general projects that are associated with rural development. These activities have substantial altered the historical conditions of the environment. It would be nearly impossible and extremely cost prohibitive to accurately measure the impacts of these actions. Therefore, the cumulative impacts are measured against existing conditions and historical conditions to the extent they are known.

Present Actions:

The only known present actions include the Retreat Development Pump Station, the Klondike Ranch conservation/management including GCW habitat on their properties, and gas and oil production activities in Johnson County. The Retreat Development Pump Station is a pump station going through part of Ham Creek Park to water an adjacent golf course. The Klondike Ranch has been and will probably continue to manage habitat for GCW. Oil and gas exploration is growing in Johnson County. These sites are usually about an acre is size and turn the land to bareground.

Reasonably Foreseeable Actions of the Corps:

The only know reasonably foreseeable projects of the Corps in the vicinity of the proposed action are the Kimble Bend Park Renovation and possible master plan supplement to establish environmentally sensitive areas. The Kimble Bend Park Renovation is a multi-phase, multi-year plan, which includes the construction of 80 new electrical campsites designed to meet or exceed current RV industry standards to satisfy current customer demand. Seventy of the new campsites will provide 50-amp service and accommodate the largest modern recreation vehicles. Sewer hookups will be included on 20 of the new sites. Ten additional sites will include screened-in shelters. A group use area consisting of 8 electrical sites and a pavilion with attached enclosed kitchen and restroom facilities will also be constructed. An additional 20 campsite will be included in an Equestrian Campground which will be set apart form the rest of the park. This area will also include a pavilion with kitchen and shower restroom facilities. Plans include the construction of three new restroom/shower buildings. The water system will be extensively upgraded to meet the needs of the park. A park entrance complex is planned to provide security for the parks users and to provide a presence to deter further degradation of the natural and cultural resource.

An interpretive plan will be developed with public involvement to take advantage of the unique resources of the Kimball Town Site. All new buildings will be designed to maintain the existing "Ghost Town" character of the park. The old streets and city blocks will be under-brushed and cleared while protecting any plants and trees that were planted by the town's original inhabitants. A climate-controlled interpretive center will be developed with assistance of the Bosque County Historical Commission, the Layland Museum in Cleburne, Texas, and Kimball Bend Historical Committee. The Center will have state of-the-art interpretive facilities and focus on the old town of Kimball, Texas as well as the Chisholm Trail. An interpretive trial will connect the Interpretive Center with the major ruins and point of interests through out the park by way of the old city streets.

Additional amenities include laundry facilities and basketball/volleyball courts. A kiosk will be located near the Interpretive Center with touch-screen display will be available to provide visitors with up-to-date information on reservations, local events, lake and park information, etc. New playground equipment suitable for all ages will be installed. A new boat ramp will be constructed on the northwest end of the park for use campers to help alleviate crowded conditions at the existing ramp and adjacent parking area. There would be no more than 20 new spots at the camp ground boat ramp and 10 new spots at the existing ramp. A covered and lighted fishing dock will be

installed near the old boat ramp to provide continuous fishing access for all ages.

The Whitney Lake Master Plan will be supplemented as funds permit to establish environmentally sensitive areas around the lake to protect GCW habitat. This would protect the habitat from future disturbance without undertaking an additional environmental assessment. This would also establish utility corridors in to help minimize impacts to the landscape.

Reasonably Foreseeable Actions of Others:

Currently known reasonably foreseeable actions of others in the project vicinity include gas and oil production activities in Johnson County, Possible wildlife refuge in the bend of the river, White Bluff Yacht Club Marina expansion, and residential developments expanding around the area.

Oil and gas production is estimated to continue in the area. In addition, there is a proposal to possible establish a wildlife refuge in the bend of the Brazos River adjacent to the project area. It is actual size of the proposed refuge is unknown at this point in time.

The White Bluff Yacht Club currently has approximately 60 wet slips at their marina. They are authorized approximately 190 in their master plan. They plan on expanding their marina by approximately 130 slips to make their total wet slips be 190.

There are at least four proposed or existing residential developments around the project area. Some of these are thousand or more unit developments.

GEOLOGY AND SOILS

There would be cumulative impacts to soils as a result of the proposed project and proposed development around the project area. It would be expected that there would be increased erosion as a result of increased impervious cover in the watershed. This is expected to be a relatively small portion of the overall watershed, and therefore should be minor impacts.

WATERS OF THE U.S. INCLUDING WETLANDS

There would be expected to be cumulative impacts to waters of the U.S. because of increased sediment transport due to increased scour and erosion and land disturbance from the proposed residential developments. It would be expected that the proposed developments would implement best management practices as would the proposed Ham Creek Development; therefore these impacts would still be expected to be minimal. In addition, there would be cumulative impacts to waters of the U.S. due to construction of the proposed Kimble Bend Park boat ramp. These would still be expected to be insignificant due to the small amounts of acres of impacts.

WATER QUALITY

There would be cumulative impacts to water quality as a result of increased scour and erosion and sediment transport due to increased impervious cover and land disturbance from residential development and gas and oil and boat ramp construction in Kimble Bend Park. These impacts would be expected to be minimal due to the fact that direct or indirect cumulative impacts from construction would not result in the Brazos River in this segment to not meet state water quality standards.

WILDLIFE AND FISH

There would be adverse and beneficial cumulative impacts to fish and wildlife species habitat as a result of the proposed action. There would be a minor beneficial impact from the protection of habitat by the Klondike Ranch and the possible creation of a refuge in the bend of the river as well as the establishment of environmentally sensitive areas at Lake Whitney. There would be adverse cumulative impacts due to the loss of habitat from the residential development, Kimble Bend Park Renovation, and gas and oil production. These impacts would not be expected to be significant because they would not directly result in the loss of a species or the protection of a species to the point that they are not listed as rare or endangered.

AQUATIC VEGETATION

There could be minimal cumulative impacts to aquatic vegetation by the construction of the Kimble Bend Park Renovation. However, these impacts would be to a small amount of acres considering Whitney Lake is over 29,000 surface acres and would therefore be insignificant.

TERRESTRIAL VEGETATION

There would be adverse and beneficial cumulative impacts to terrestrial vegetation as a result of the proposed action. There would be a minor beneficial impact from the protection of or improvement of vegetation by the Klondike Ranch and the possible creation of a refuge in the bend of the river as well as the establishment of environmentally sensitive areas at Lake Whitney. There would be adverse cumulative impacts due to the loss of vegetation from the residential development, Kimble Bend Park Renovation, and gas and oil production. These impacts would not be expected to be significant because they would not directly result in the total loss of a particular vegetation type.

THREATENED AND ENDANGERED SPECIES

There would be cumulative beneficial and adverse impacts to the GCW as a result of the proposed action. Beneficial impacts would be from the protection of habitat by the Klondike Ranch, possible protection of habitat by the designation of areas as environmentally sensitive areas, and possible protection of habitat as a result of establishing a wildlife refuge in the bend of the river. There would be adverse impacts if the oil and gas production and the residential developments destroyed additional habitat. These impacts are expected to be minor in the overall recovery of the GCW and therefore, they are insignificant.

NOISE AND GENERAL AESTHETICS

There would be cumulative impacts to the overall noise and aesthetics of the area as a result of residential development and oil and gas production. The impacts are expected to be minimal with regards to the proposed action because the impacts of the proposed action are so concentrated.

CULTURAL RESOURCES

There are no direct or indirect impacts expected as a result of the proposed action, and therefore, there can be no cumulative impacts.

HAZARDOUS, TOXIC AND RADIOACTIVE WASTES

There are no direct or indirect impacts expected as a result of the proposed action, and therefore, there can be no cumulative impacts.

AIR QUALITY

There could be cumulative impacts to air quality as a result of the proposed action and the construction of the other proposed projects of others. These projects would be spread out over a large geographic area and the construction would likely take place during different time periods, and therefore, the cumulative impacts should be minimal to almost non-existent.

RECREATION

There would be both cumulative beneficial and adverse impacts to recreation as a result of the proposed actions of the Corps ands others. The proposed parks would provide more recreational opportunities for the increased number of residences in the area as a result of increased residential developments. In addition, it would relieve the increased pressure from existing parks. It would however have a cumulative impact on the acres of water per boat ratio for the lake. The combined Kimble Bend (30 new boat ramp spaces) and Ham Creek Park (50 new boat ramp spaces)

projects would increase the cumulative total to 33.9 acres of water per boat from the existing 38.2 acres per boat. In addition, with the possible White Bluff Yacht Club marina expansion, there would be approximately 130 new wet slips in their marina. Wet slips are calculated differently than boat ramp slips. It is assumed that only one boat per every 10 would be on the water. This would increase the total by an additional 13 boats. Therefore, it would bring the total combined projects to 33.2 boats per acre. This is still well under the district proposed level of 22 acres of water per boat. There would still be an increased safety risk if additional boat traffic were increased in this particular area. To make sure additional cumulative impacts do not occur, any additional future boat ramp expansion or construction in this part of the lake would require a water related recreation use study.

SOCIOECONOMICS

There would be temporary beneficial cumulative impacts to socioeconomics in the area due to new construction in the area. These would be expected to be minor due to the fact that the construction would be temporary in nature.

7.0 PUBLIC INVOLVEMENT

7.1 AGENCY COORDINATION

USACE coordinated with the U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department and Texas Historic Preservation officer during the preparation of this EA. In addition, the draft EA will be coordinated with the appropriate Indian tribes. Correspondence with these and other agencies are located in Appendix D. The draft EA will be coordinated with the following agencies:

U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
Texas Parks and Wildlife Department
Texas Commission on Environmental Quality
Texas State Historic Preservation Officer

7.2 PUBLIC INFORMATION AND REVIEW

USACE sent a New Release on August 1, 2005 to all members of the public requesting volunteers to participate in series of recreational workshops for the planning and designing of the Ham Creek Park. On October 11, 2005 USACE held its first meeting with approximately 30 people at the Guinn Justice Center in Cleburne to discuss Ham Creek Park and the public workshops. Three groups were organized and workshops were held independently and three separate proposals were developed as discussed as Alternatives 1, 3, and 4 in this EA. Alternative 2 is Alternative 1, but with a different gate house location. Finally on December 14, 2005, the large group met again at the Guinn Justice Center and selected Alternative 1 as the proposed alternative with two locations for the gate house. The two options for the gate house are described as Alternatives 1 and 2. Alternative 1 was the recommended plan and the proposed action. On January 9, 2006 USACE met with the Johnson County Commissioners and Alternative 1 was unanimously approved as the proposed action by the county commissioners. Correspondence related to team involvement is located in Appendix D.

The draft EA will be released for a 30-day public comment period. A Notice of Availability (Appendix D) was sent out releasing this draft for public review.

8.0 FINDINGS AND CONCLUSIONS

Implementing Alternative 1 (The Proposed action) for the Ham Creek Park Development would have various impacts to the environment. Minor insignificant impacts would occur to soils, Waters of the U.S., water quality, fish and wildlife resources, aquatic and terrestrial vegetation, noise and general aesthetics, and air quality. Minor benefits would occur to socioeconomics and recreation. There would be no impacts expected for hazardous, toxic, and radioactive wastes and cultural resources. There would be minor cumulative adverse impacts to soils, Waters of the U.S., water quality, fish and wildlife resources, aquatic and terrestrial vegetation, noise and general aesthetics,

air quality, and recreation. There would be minor beneficial cumulative impacts to fish and wildlife resources, terrestrial vegetation, recreation, and socioeconomics.

The Service issued a biological opinion that determined the project would destroy 8.5 acres and cause harassment on 109 acres of golden cheeked warbler habitat. The Service determined that a total of 117.5 acres would be authorized as incidental take under Section 9 of the ESA and that the project would not jeopardize the continued existence of the golden cheeked warbler. USACE would implement all of the terms and conditions stated within the biological opinion.

The Whitney Lake Master Plan would be supplemented to designate Ham Creek Park as a high intensity park area within designated "No-Build Zones" within the park boundaries after construction of proposed project amenities.

Approximately 1.7 acres of Waters of the U.S. would be impacted. It is anticipated that CESWF-97-LOP-1 would be used to authorize the project. This determination is being consulted with the natural resource agencies.

Approximately $900,000 in funds has been appropriated, that is required to be spent in Fiscal Year 2006, by Congress. This is in-sufficient funds for total construction of the proposed Ham Creek Park Development. Additional funds are expected to be appropriated in the future. Therefore, the project construction would be constructed in at least three separate phases as funds become available.

Phase I of the constructions would be to install things primarily associated with constructing the new boat ramp. This would include the following as funds permit: entrance road, vehicle safety barriers along main road, boat ramp and parking, lighting for ramp and turnaround, park barriers along perimeters, close old boat ramp access, utilities for gate house, and a possible restroom. If funds did not allow, some of the activities could be moved to Phase II. Phase II would be to construct the Day use facilities and camping infrastructure. Finally, Phase III would be to construct the remaining recreation facilities including the camping facilities.

Upon project completion or partial completion, USACE would lease Ham Creek Park to Johnson County and Johnson County would be responsible for the operation and maintenance of the facility. Recreation related use fees would be charge to the visiting public by Johnson County.

Based on the findings and conclusions in this EA and the attached draft Finding of no Significant Impact (FONSI), it is determined that the proposed Ham Creek Park Development would not be a major Federal action that would require an Environmental Impact Statement.

9.0 REFERENCES

Audubon Watchlist. 2005, website http://audubon2.org/webapp/watchlist/viewSpecies.jsp?id=31

Texas Commission of Environmental Quality. 2005. website http://www.tceq.state.tx.us/assets/public/compliance/monops/water/assessments/04_1203_fact.pdf

U.S. Army Corps of Engineers - Fort Worth District. 1983. Environmental Impact Assessment, Park Closures Within the Fort Worth District. USACE, March 18, 1983.

U.S. Army Corps of Engineers - Fort Worth District. 1976. Final Environmental Statement for the Operations and Maintenance Programs of Whitney Lake, Waco Lake, Proctor Lake, Stillhouse Hollow Dam and Lake, and Somerville Lake, Brazos River Basin, Texas. USACE, April 1976.

United States Army Corps of Engineers – Fort Worth District. 2006. USACE Reservoir Control-Hydrological Data Website http://www.swf-wc.usace.army.mil

United States Army Corps of Engineers – Fort Worth District. 2006. Visitation Estimating Report System.

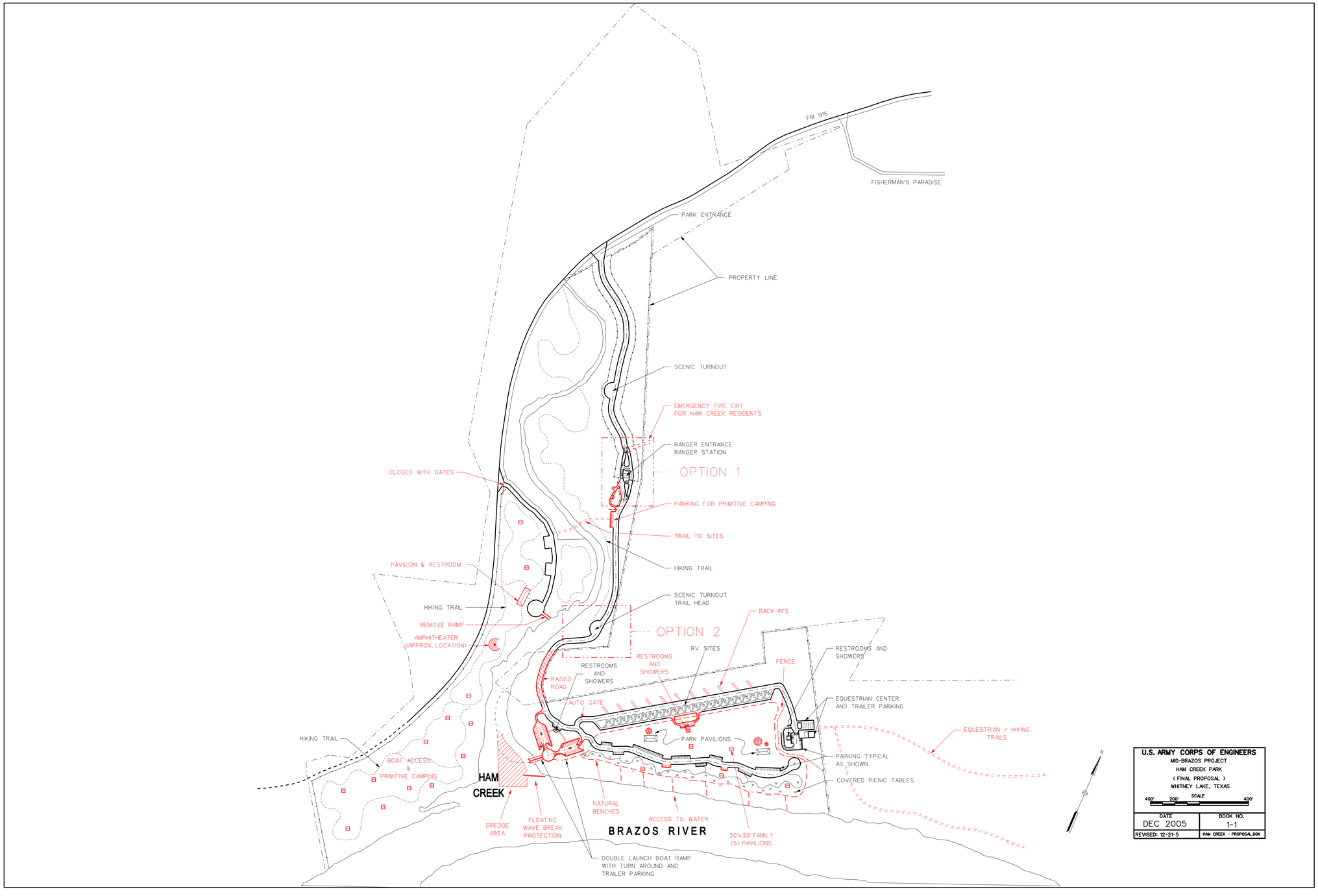
United States Census Bureau. 2005, website http://factfinder.census.gov/home/saff/main.html?_lang=en

United States Department of Agriculture. 1985. Soil Survey of Johnson County, Texas. Natural Resource Conservation Service, October 1985.

United States Department of Environmental Protection Agency. 2005. website http://www.epa.gov/air/data/geosel.html

United States Fish and Wildlife Service. 2006. Draft Biological Opinion on USACE's Proposed Development of Ham Creek Park.

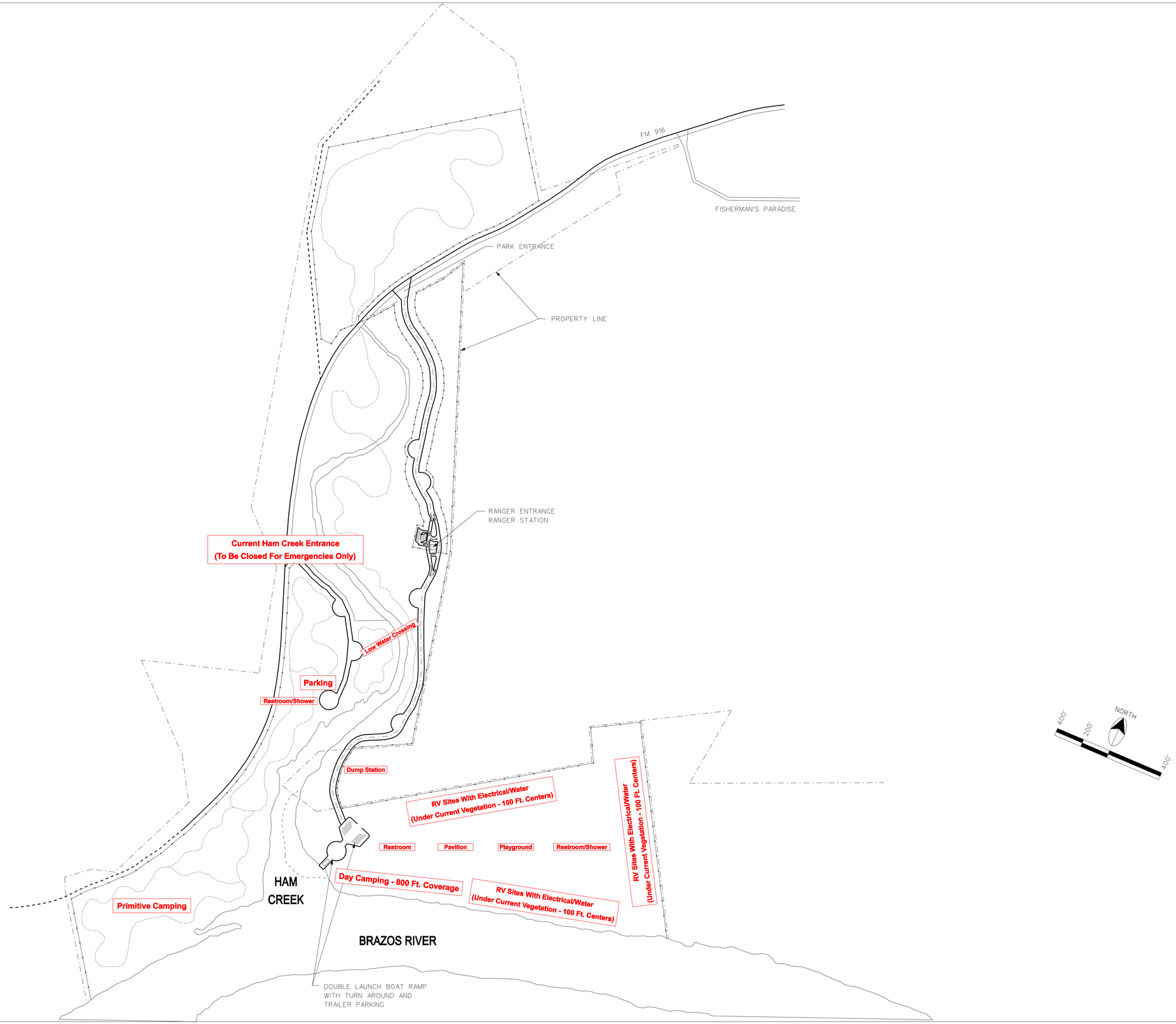
APPENDIX A
FIGURES



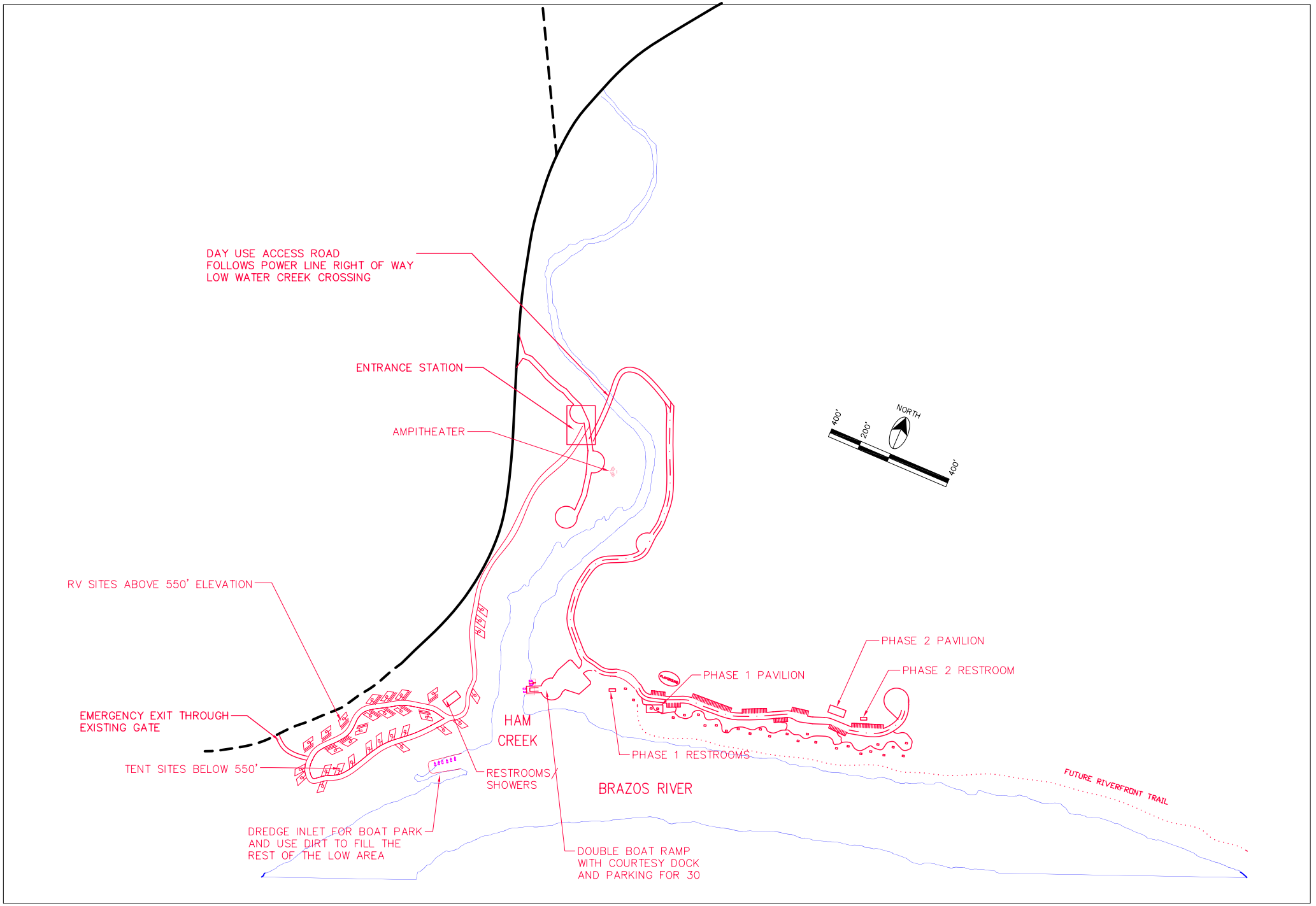
U.S. ARMY CORPS OF ENGINEERS
MID-BRAZOS PROJECT
HAM CREEK PARK
(FINAL PROPOSAL)
WHITNEY LAKE, TEXAS

SCALE
400' 200' 400'

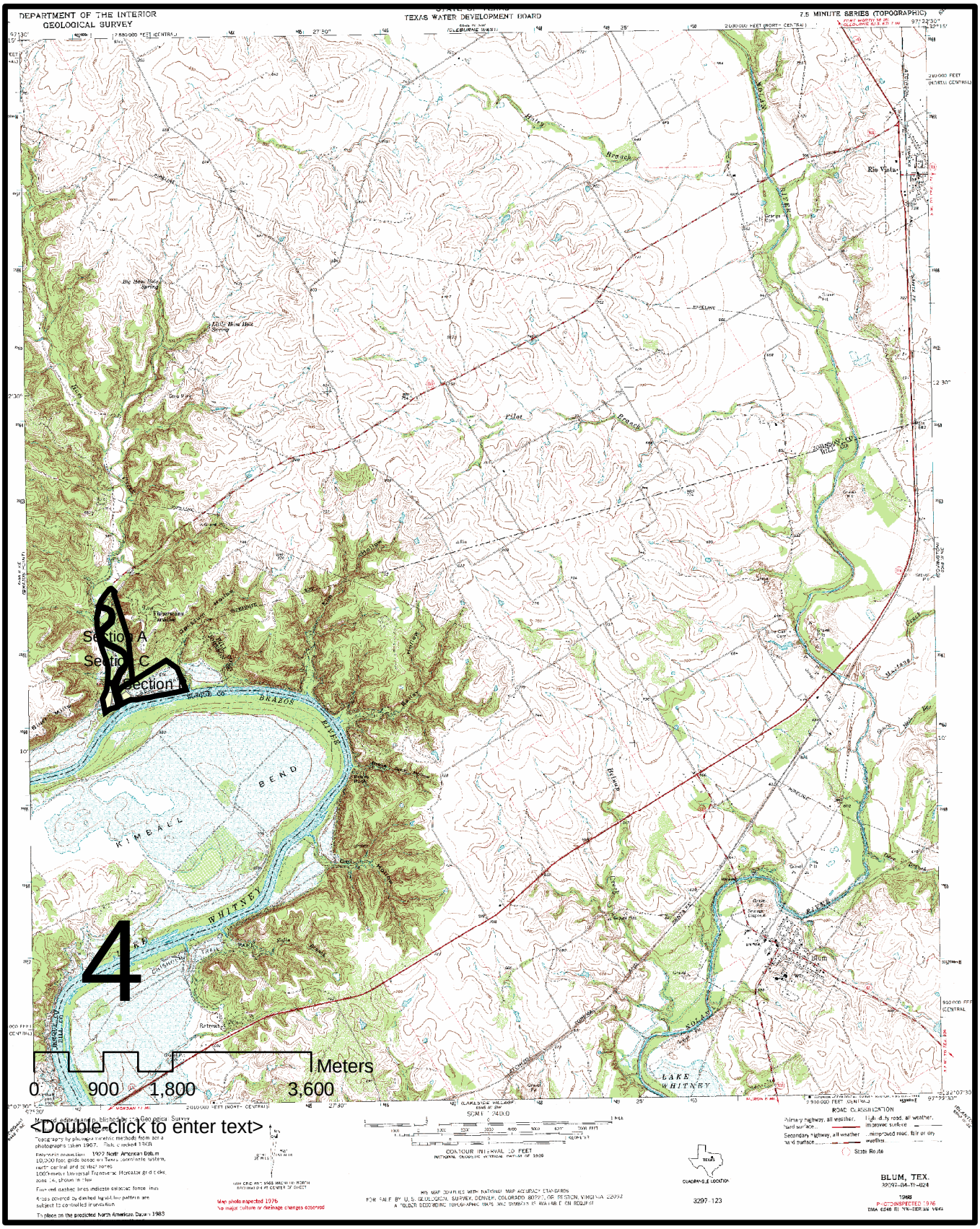
DATE	BOOK NO.
DEC 2005	1-1
REVISED: 12-21-5	HAM CREEK - PROPOSAL.DGN



GROUP "A"
DATE: 12-16-5


DAY USE ACCESS ROAD
FOLLOWS POWER LINE RIGHT OF WAY
LOW WATER CREEK CROSSING
ENTRANCE STATION
AMPITHEATER
RV SITES ABOVE 550' ELEVATION
EMERGENCY EXIT THROUGH
EXISTING GATE
TENT SITES BELOW 550'
HAM
CREEK
RESTROOMS/
SHOWERS
DREDGE INLET FOR BOAT PARK
AND USE DIRT TO FILL THE
REST OF THE LOW AREA
DOUBLE BOAT RAMP
WITH COURTESY DOCK
AND PARKING FOR 30
BRAZOS RIVER
PHASE 1 PAVILION
PHASE 1 RESTROOMS
PHASE 2 PAVILION
PHASE 2 RESTROOM
FUTURE RIVERFRONT TRAIL
400'
200'
NORTH
400'

Ham Creek Park Project Area



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HAM CREEK

STA. 000
528.0 ELE.

STA. 100
524.7 ELE.

STA. 200
521.3 ELE.

STA. 300
518.0 ELE.

STA. 400
514.7 ELE.

STA. 500
511.3 ELE.

STA. 600
508 ELE.

℄ OF CREEK
ESTIMATED DEPTHS

A

B

CONCRETE BOAT RAMP

20'
15'
15'
20'
75'
5'
200'

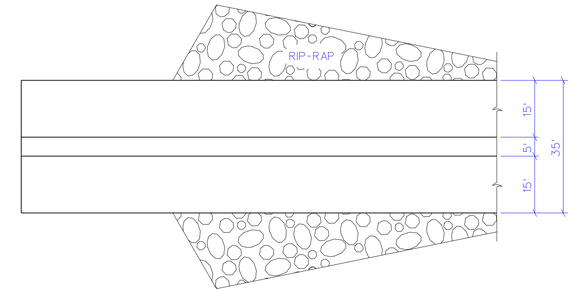
FLOATING WAVE
BREAK PROTECTION

.08 ACRES OF IMPACT
FROM THE BOAT RAMP
(50 CY EST. DREDGING)

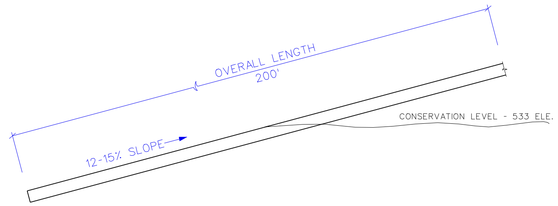
1.7 ACRES OF IMPACT
FROM DREDGING
(30,000 CY EST.)

℄ OF CREEK

BRAZOS RIVER



PLAN VIEW



SECTION A-A

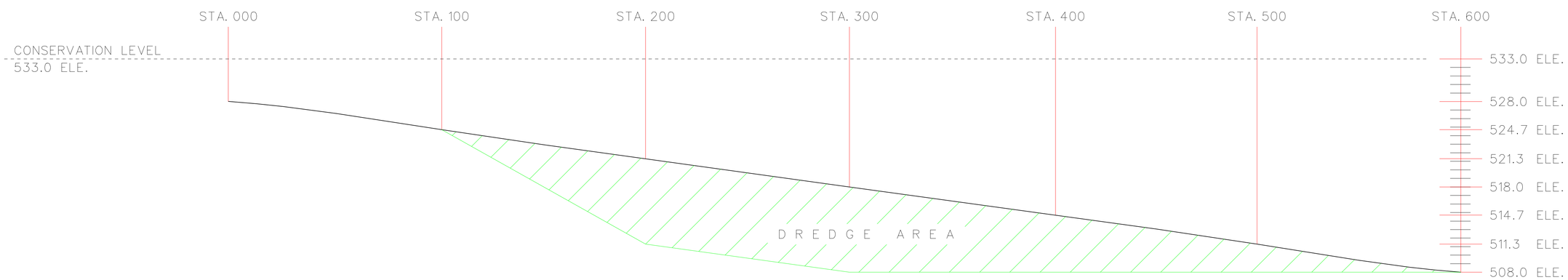
RAMP DETAILS

SCALE: NTS

U.S. ARMY CORPS OF ENGINEERS
MID-BRAZOS PROJECT
HAM CREEK PARK
(BOAT RAMP AREA)
WHITNEY LAKE, TEXAS

SCALE
40' 20' 40'

DATE	BOOK NO.
DEC 2005	1-1
REVISED: 2-16-6	HAM CREEK - BOAT RAMP



SECTION B-B

HAM CREEK PARK
SCALE: NTS

APPENDIX B
THREATENED AND ENDANGERED SPECIES INFORMATION

BOSQUE COUNTY

	Federal Status	State Status
***** BIRDS *****		
Arctic Peregrine Falcon (*Falco peregrinus tundrius*) - potential migrant	DL	T
Bald Eagle (*Haliaeetus leucocephalus*) - found primarily near seacoasts, rivers, and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds	LT-PDL	T
Black-capped Vireo (*Vireo atricapilla*) - oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer	LE	E
Golden-cheeked Warbler (*Dendroica chrysoparia*) - juniper-oak woodlands; dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer	LE	E
Henslow's Sparrow (*Ammodramus henslowii*) - wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking; likely to occur, but few records within this county		
Interior Least Tern (*Sterna antillarum athalassos*) – this subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish & crustaceans, when breeding forages within a few hundred feet of colony	LE	E
Migrant Loggerhead Shrike (*Lanius ludovicianus migrans*) - open and semi-open grassy areas with scattered trees and brush; breeding March-late August		
Mountain Plover (*Charadrius montanus*) – breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous		
Western Burrowing Owl (*Athene cunicularia hypugaea*) - open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows and man-made structures, such as culverts		
Whooping Crane *(Grus americana*) - potential migrant; winters in and around Aransas National Wildlife Refuge and migrates to Canada for breeding; only remaining natural breeding population of this species	LE	E
***** FISHES *****		
Guadalupe Bass (*Micropterus treculii*) – introduced in Nueces River system; endemic to perennial streams of the Edwards Plateau region		
Sharpnose Shiner (*Notropis oxyrhynchus*) – endemic to Brazos River drainage; also, apparently introduced into adjacent Colorado River drainage; large turbid river, with bottom a combination of sand, gravel, and clay-mud	C1	

BOSQUE COUNTY, cont'd

	Federal Status	State Status
Smalleye Shiner (*Notropis buccula*) – endemic to upper Brazos River system and its tributaries; apparently introduced into adjacent Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warm water; presumably eats small aquatic invertebrates	C1	

*** INSECTS ***

Leon River Winter Stonefly (*Taeniopteryx starki*) - habitat not described in detail, but apparently breeds in rivers; several members of this genus are known to use warm lotic environments, while others use cold lotic environments

*** MAMMALS ***

Cave Myotis Bat (*Myotis velifer*) - roosts colonially in caves, rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (*Petrochelidon pyrrhonota*) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum caves of Panhandle during winter; opportunistic insectivore

Plains Spotted Skunk (*Spilogale putorius interrupta*) – catholic in habitat; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie

MOLLUSKS

False Spike Mussel *(Quincuncina mitchelli*) - substrates of cobble and mud, with water lilies present; Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins

Pistolgrip *(Tritogonia verrucosa*) - stable substrate, rock, hard mud, silt, and soft bottoms, often buried deeply; east and central Texas, Red through San Antonio River basins

Rock-pocketbook (*Arcidens confragosus*) - mud, sand, and gravel substrates of medium to large rivers in standing or slow flowing water, may tolerate moderate currents and some reservoirs, east Texas, Red through Guadalupe River basins

Smooth Pimpleback *(Quadrula houstonensis*) - small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel, tolerates very slow to moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms, lower Trinity (questionable), Brazos, and Colorado River basins

Texas Fawnsfoot *(Truncilla macrodon*) - little known; possibly rivers and larger streams, and intolerant of impoundment; flowing rice irrigation canals, possibly sand, gravel, and perhaps sandy-mud bottoms in moderate flows; Brazos and Colorado River basins

*** REPTILES ***

Brazos Water Snake (*Nerodia harteri*) - upper Brazos River drainage; in shallow water with rocky bottom and on rocky portions of banks — T

Texas Garter Snake (*Thamnophis sirtalis annectens*) - wet or moist microhabitats are conducive to the species occurrence, but is not necessarily restricted to them; hibernates underground or in or under surface cover; breeds March-August

	Federal Status	State Status
Texas Horned Lizard (*Phrynosoma cornutum*) - open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September		T
Timber/Canebrake Rattlesnake (*Crotalus horridus*) - swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland, limestone bluffs; sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto		T

Status Key:
LE,LT - Federally Listed Endangered/Threatened
PE,PT - Federally Proposed Endangered/Threatened
E/SA,T/SA - Federally Endangered/Threatened by Similarity of Appearance
C1 - Federal Candidate, Category 1; information supports proposing to list as endangered/threatened
DL,PDL - Federally Delisted/Proposed for Delisting
NL - Not Federally Listed
E,T - State Endangered/Threatened
"blank" - Rare, but with no regulatory listing status

Species appearing on these lists do not all share the same probability of occurrence. Some species are migrants or wintering residents only, or may be historic or considered extirpated.

JOHNSON COUNTY

	Federal Status	State Status
***** BIRDS *****		
Arctic Peregrine Falcon (*Falco peregrinus tundrius*) - potential migrant	DL	T
Bald Eagle (*Haliaeetus leucocephalus*) - found primarily near seacoasts, rivers, and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds	LT-PDL	T
Black-capped Vireo (*Vireo atricapilla*) - oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous & broad-leaved shrubs & trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, & required structure; nests mid April-late summer	LE	E
Golden-cheeked Warbler (*Dendroica chrysoparia*) - juniper-oak woodlands; dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees & shrubs; nests late March-early summer	LE	E
Henslow's Sparrow (*Ammodramus henslowii*) - wintering individuals (not flocks) found in weedy fields or cut-over areas where lots of bunch grasses occur along with vines and brambles; a key component is bare ground for running/walking; likely to occur, but few records within this county		
Interior Least Tern (*Sterna antillarum athalassos*) – this subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also know to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc); eats small fish & crustaceans, when breeding forages within a few hundred feet of colony	LE	E
Migrant Loggerhead Shrike (*Lanius ludovicianus migrans*) - open and semi-open grassy areas with scattered trees and brush; breeding March-late August		
Mountain Plover (*Charadrius montanus*) – breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous		
Western Burrowing Owl (*Athene cunicularia hypugaea*) - open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows and man-made structures, such as culverts		
White-faced Ibis (*Plegadis chihi*) - prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats		T
Whooping Crane *(Grus americana*) - potential migrant; winters in and around Aransas National Wildlife Refuge and migrates to Canada for breeding; only remaining natural breeding population of this species	LE	E

	Federal Status	State Status
***** FISHES *****		
Sharpnose Shiner (*Notropis oxyrhynchus*) – endemic to Brazos River drainage; also, apparently introduced into adjacent Colorado River drainage; large turbid river, with bottom a combination of sand, gravel, and clay-mud	C1	
Smalleye Shiner (*Notropis buccula*) - endemic to upper Brazos River system and its tributaries; apparently introduced into adjacent Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warm water; presumably eats small aquatic invertebrates	C1	
***** MAMMALS *****		
Plains Spotted Skunk (*Spilogale putorius interrupta*) – catholic in habitat; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie		
*****MOLLUSKS*****		
Pistolgrip *(Tritogonia verrucosa*) - stable substrate, rock, hard mud, silt, and soft bottoms, often buried deeply; east and central Texas, Red through San Antonio River basins		
Rock-pocketbook (*Arcidens confragosus*) - mud, sand, and gravel substrates of medium to large rivers in standing or slow flowing water, may tolerate moderate currents and some reservoirs, east Texas, Red through Guadalupe River basins		
Texas Fawnsfoot *(Truncilla macrodon*) - little known; possibly rivers and larger streams, and intolerant of impoundment; flowing rice irrigation canals, possibly sand, gravel, and perhaps sandy-mud bottoms in moderate flows; Brazos and Colorado River basins		
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Texas Horned Lizard (*Phrynosoma cornutum*) - open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive; breeds March-September		T
Timber/Canebrake Rattlesnake (*Crotalus horridus*) - swamps, floodplains, upland pine and deciduous woodlands, riparian zones, abandoned farmland, limestone bluffs; sandy soil or black clay; prefers dense ground cover, i.e. grapevines or palmetto		T

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HILL COUNTY

	Federal Status	State Status
***** BIRDS *****		
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Bald Eagle (*Haliaeetus leucocephalus*) - found primarily near seacoasts, rivers, and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds	LT-PDL	T
Black-capped Vireo (*Vireo atricapilla*) - oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer	LE	E
Golden-cheeked Warbler (*Dendroica chrysoparia*) - juniper-oak woodlands; dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer	LE	E
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	Federal Status	State Status

presumably eats small aquatic invertebrates

*** MAMMALS ***

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
WinSystems Center Building
711 Stadium Drive, Suite 252
Arlington, Texas 76011

21420-2006-F-0055

February 14, 2006

Ronald L. Bruggman
Department of the Army
Fort Worth District, Corps of Engineers
Whitney/Aquilla Lakes
285 CR 3602
Clifton, Texas 76634

Dear Mr. Bruggman:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the U.S. Army Corps of Engineers (USACE) proposed development of Ham Creek Park for future recreational use and its effects on the federally listed golden-cheeked warbler (*Dendroica chrysoparia*) (GCWA). The park encompasses approximately 191 acres and is located in Johnson County, Texas on the northern portion of Whitney Lake.

This biological opinion has been prepared in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.) The biological opinion is based on the Biological Assessment included with your letter initiating consultation, information provided by USACE staff, and other sources of information. A complete administrative record of this consultation is on file at the Service's Arlington, Texas, Ecological Services Field Office.

Consultation History

August 4, 2005: Initial meeting and site visit hosted by members of Whitney Lake USACE staff to discuss proposed development of Ham Creek Park for future recreational use. Whitney Lake USACE personnel provided information on the presence of listed species on the park property. Service representatives identified habitat indicators found on the property and discussed the consultation process, including timelines and biological assessment content, provided a copy of the Consultation Handbook, and provided guidelines on minimization measures.

August 12, 2005: E-mailed additional information to Whitney Lake USACE staff regarding assembly of a Biological Assessment (BA) and invited them to share any draft copies as they became available.

September 9, 2005: Received telephone request from Ernest Eberly of the Whitney Lake USACE for additional information regarding the BA. Mr. Eberly was advised that the Service would be responsible for evaluating the estimated effects of the action to listed species and that the USACE should provide an account of all planned actions, project timeframes, and details of park usage after completion.

November 7, 2005: Arlington Field Office received written request from USACE initiating formal consultation on the proposed action. Written acknowledgement of the initiation package was sent to USACE on November 21, 2005.

December 21, 2005: Second site visit conducted at Ham Creek Park property. Service personnel and Ronald Bruggman and Sam Masters of Whitney Lake USACE clarified the dimensions of GCWA habitat within and beyond USACE property boundaries potentially impacted by the proposed project. Current account of project plans also disclosed and minimization measures discussed.

BIOLOGICAL OPINION

I. Description of Proposed Action

The USACE in conjunction with Johnson County proposes to develop Ham Creek Park at Whitney Lake for future recreational opportunities. The property proposed for development is approximately 191 acres and is located in Johnson County on the northern portion of Whitney Lake. The park is divided east and west by Ham Creek and its riparian corridor and is further designated into sections A, B, and C, each differing in topography, vegetation, and proposed development.

General: Park development would include facilities for day-users and campers. Existing facilities and roadways would be utilized to the maximum extent possible. Park development would be contained within the footprint of existing park facilities as much as possible. Trails may extend outside the described footprint. Figure 1 details the proposed park development.

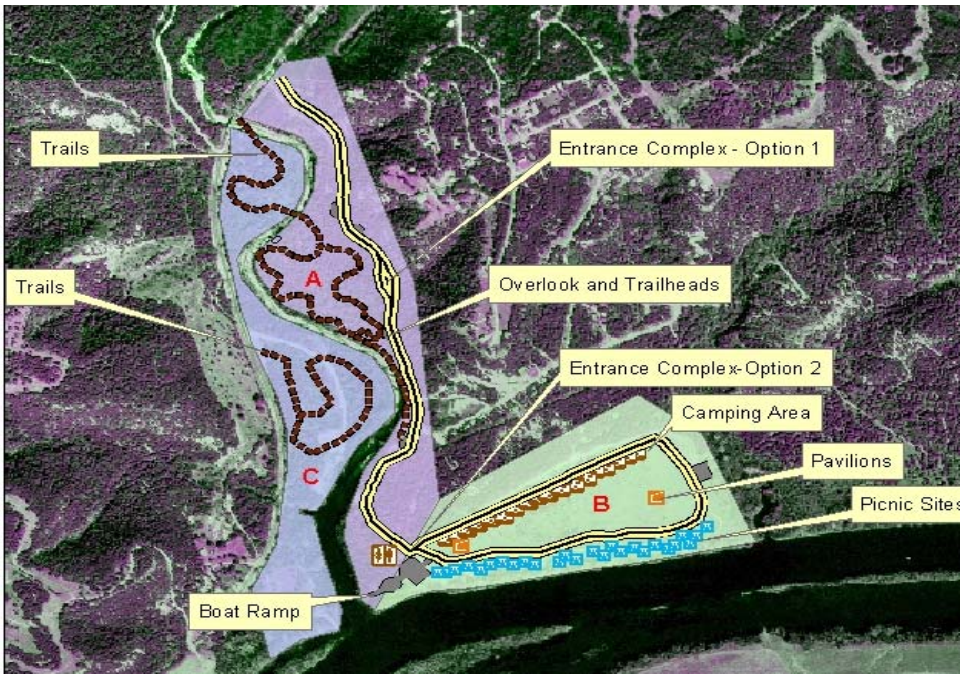


Figure 1. Proposed Park Development

Existing roadway surfaces are 20 feet wide and are mostly gravel overgrown with grass and forbs, with the exception of asphalt roadways located on the west side of the park. The tree canopy overhanging the road surface would be trimmed to a height of 15 feet. All roadway surfaces would remain 20 feet wide. Gravel roadway surfaces would be improved to an asphalt surface and existing asphalt surfaces would have new asphalt surfacing applied. Road shoulders and adjacent drainage ditches would be widened. Existing shoulders and drainage ditches vary up to 5 feet from the edge of the roadway. New road shoulders would be up to 2 feet on both sides of the road. New drainage ditches, with culverts under the roadway as necessary to allow for adequate drainage, would be up to 6 feet wide. Utility lines, including electric, water, sewer and telephone, would be placed within the road shoulders. Road surfaces and corresponding rights-of-way (ROW) would total a width of 36 feet throughout their lengths.

The trails would support hiking, biking and equestrian use. Trail size would average 11 feet wide and would consist of an unimproved surface. Trails situated within woody vegetation would be designed to minimize vegetation removal and no trees would be removed. Tree limbs overhanging the trail at a height less than 16 feet would be trimmed to allow for horse and rider clearance. Specific trail length is not yet determined, but it is estimated approximately 1.5 miles of trail may extend through GCWA habitat within Ham Creek Park. Barriers would be placed at trail entrances to prevent vehicular access, and trails would only be available during daylight hours. Trail entrances would also have signs noting restrictions in order to minimize potential impacts to GCWAs.

Barbed-wire fence and/or pipe fence would be installed along the perimeter of the entire park to prevent ATV access. Vehicle barriers in the form of pipe fence would be placed along roadways and parking areas to restrict vehicle access to road surfaces only. Security lights would be installed at the boat ramp, restrooms, and gatehouse complex for security and safety purposes. Refuse receptacles would be utilized throughout the recreation area.

It is anticipated that initial construction would occur between March and September 2006. Construction would occur in phases over several years as funding is received. Phase I includes renovating existing roadways and constructing a boat ramp with parking lot and courtesy dock. Phase II would involve the renovation of an existing restroom, construction of a new gatehouse entrance complex, new restroom and installing utility lines. Campsites, group shelters, and trails would be constructed in Phase III.

The action area for the proposed project includes the anticipated extent of the direct and indirect effects. The Service has determined the action area to include the proposed 191 acre property and an approximately 51.4 acre area immediately adjacent to the property for reasons that are discussed in the "Effects of the Action" section of this opinion.

Park Sections:

Section A (56 acres) is approximately 4200 feet in length and begins at FM 916, extending to confluence with the Brazos River and varying in width from 153-1,080 feet (Figure 1). The canyon slope along this section is vegetated with mature juniper/oak woodlands. Ashe juniper *(Juniperus ashei)* and plateau live oak (*Quercus fusiformis*) are the dominant tree species in the overstory. Other species occurring less frequently include Texas red oak (*Quercus buckleyi*), white shin oak (*Quercus sinuata* var. *breviloba*), American sycamore (*Platanus occidentalis*), netleaf hackberry (*Celtis reticulate),* cedar elm (*Ulmus crassifolia*), and Texas ash (*Fraxinus texensis*). The canopy cover of the wooded upland areas ranges from 75-90%.

A gate entrance complex would be installed along the access road. The specific location is not yet determined, but would either be placed in Section A or B, with Section A being the preferred alternative (Ronald Bruggman, pers. comm. 2005). The complex would include one-way entrance and exit lanes, gatehouse, parking lot, pull-off lanes, and two gate attendant pads. The complex would be comprised of approximately 4 acres. Section A is a long wooded corridor paralleling the east side of the creek bed, which would serve as the main access road for the park.

Section B (58 acres) is comprised of relatively flat, grassy lowlands situated along the flood plain of the Brazos River that would serve as the camping and day use area. The area is generally vegetated with herbaceous species including Johnsongrass (*Sorghum halapense*), silver bluestem (*Bothriochola laguroides*), giant ragweed (*Ambrosia trifida*), Texas bluebonnet (*Lupinus texensis*) and goldenrod (*Solidago* sp.) Low shrubs, Virginia creeper *(Parthenocissus quinquefolia),* wild grape and green briar vines, along with small clusters of young elm, hackberry, and oak trees, are scattered throughout. A mature juniper-oak complex occupies the fence line along northwestern boundary of this section, while a mix of mature pecan, oak and elm trees line the river bank on the southern edge.

This area would include most of the park facilities. A two-lane boat ramp with a parking lot containing approximately 50 parking spaces to accommodate vehicles with boat trailers would be constructed adjacent to Ham Creek just upstream of the lake. A courtesy dock for boat loading and unloading would also be placed adjacent to the boat ramp. An existing waterborne restroom with showers may be renovated and an additional waterborne restroom would be constructed. It is anticipated that the existing county water system may provide water services. Thirty-five campsites with electricity and water hook-ups would be constructed along the upper portion of the section and twenty picnic sites would be placed near the lakeshore. Additional amenities would include a playground, dump station, group shelters, a hiking/equestrian trail and other various amenities. Trails in Section B may extend beyond the park footprint.

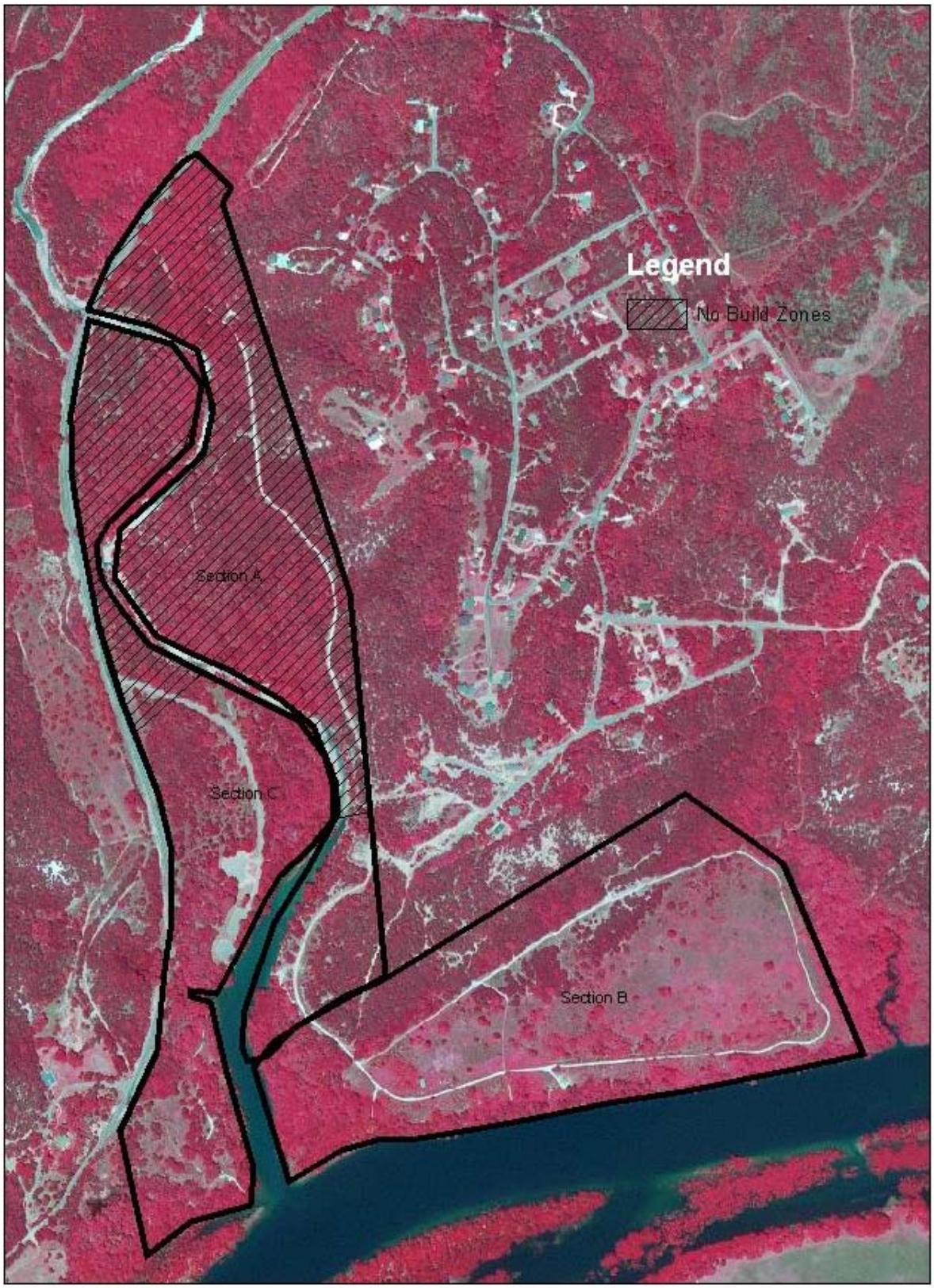
Section C (46 acres) is located on the west side of Ham Creek and appears to contain no suitable GCWA habitat (Anjna O'Connor, pers. comm. 2005). Ashe juniper and plateau live oak are the dominant tree species in the overstory, although few mature ashe junipers are present. Other species occurring less frequently include Texas red oak, white shin oak, American sycamore, netleaf hackberry, cedar elm, and Texas ash. The canopy cover of the wooded upland areas ranges from 75-90%. The area is generally vegetated with herbaceous species including Johnsongrass, silver bluestem, giant ragweed, Texas bluebonnet, and goldenrod. Low shrubs, Virginia creeper, wild grape and green briar vines, along with small clusters of young elm, hackberry, and oak trees are scattered throughout the interior.

The trail in Section C would be for hiking-only and would have an unimproved surface 8 feet wide. Like the other hiking and equestrian trails, it would be routed to minimize woody vegetation removal and no trees would be removed. A shelter may be placed adjacent to the road near the middle of Section C. The existing boat ramp within the section would be closed. The road below the hiking trail and group shelter may be closed preventing vehicle access.

Minimization Measures: The proposed action also includes several minimization measures in the form of preservation of existing GCWA habitat on the property and efforts to minimize the impacts of human disturbance before and after the park becomes operational. In order to protect and minimize impacts to existing habitat while allowing for the development of the park, perpetual No-Build Zones would be established to preserve GCWA habitat. No-Build Zones would include portions of Sections A and C (Figure 2) after completion of (and outside of) the proposed roadway widening, entrance complex, group shelters, perimeter fencing, and trails. The remaining portion of Section A not included within the No-Build Zone is privately owned, but USACE retains an easement.

Vehicle barriers would also be placed along all roadways and parking areas to prevent vehicular access within GCWA habitat and barbed-wire and/or pipe fence installed along park perimeter to prevent illegal ATV access. Construction would only be permitted outside of the No-Build Zones. Previously disturbed areas would be utilized whenever possible when establishing specific locations for facilities. Whenever possible, facilities would be located as far away as possible from GCWA habitat.

Figure 2: No-Build Zones, Ham Creek Park, Johnson County, Texas



It is anticipated the park would operate under Title 36 Rules and Regulations and any additional restrictions placed by the Corps of Engineers and Johnson County. Park gates would be open from 6 am to 10 pm and quiet hours would be in effect from 10 pm to 6 am. All pets would be required to remain restrained at all times. Campfires would be permitted in accordance with local county authority. Gathering firewood would be permitted; however, gathering firewood within GCWA habitat would not be permitted and signs would be installed adjacent to GCWA habitat to that effect.

Construction activities would take place outside of the GCWA nesting season, March through end of July, as much as possible. Due to the fiscal year budgeting process, road construction activities will be necessary during the nesting season. Construction of the remaining facilities adjacent to and within GCWA habitat would occur outside of the GCWA nesting season, with timely funding of project appropriations.

Trees would remain undisturbed to every extent possible. Specific facility locations would be determined by the location of trees and the location for which the least tree disturbance would occur. Tree canopies over roadways would remain intact as much as possible.

Potential impacts of lighting generated by the park development would be minimized through the use of directional lighting. The lighting would be directed away from GCWA habitat as much as possible.

Monitoring of GCWAs would be performed to aid in preservation of habitat within Ham Creek Park. Potential disturbances would be reduced as much as possible following Service recommendations. In addition, as funding allows, wildlife and plant communities would be monitored and appropriate management measures taken as recommended by the Service. This includes the monitoring of oak wilt fungus which if detected, would be controlled to reduce and prevent its spread, depending on availability of funding.

II. Status of the Species

The current list of federally threatened (T), endangered (E), and candidate (C) species that are known to occur, or have been documented in Johnson County consists of the following:

bald eagle (*Haliaeetus leucocephalus*) – T
black-capped vireo (*Vireo atricapilla*) – E
golden-cheeked warbler (*Dendroica chrysoparia*) – E
whooping crane (*Grus americana*) – E

The black-capped vireo and whooping crane are known to occur in Johnson County, but are not expected to occur in the action area due to the lack of habitat. For this reason, USACE has determined that the proposed action would have no effect on the black-capped vireo and whooping crane. Therefore, these species will not be discussed further in this biological opinion, and no take of these species is authorized.

The bald eagle has been reported at various locations at Whitney Lake, but none within or

adjacent to Ham Creek Park have been reported. Habitat within the park and along the shoreline is not considered preferred habitat; however, it is possible that bald eagles could potentially utilize trees along the shoreline for perching. For these reasons, the proposed action is not likely to adversely affect bald eagles. Therefore, this species will not be discussed further in this biological opinion, and no take of this species is authorized.

The federally listed endangered species that does occur in the action area and that may be affected by the proposed action is the GCWA. The Service emergency listed the GCWA on May 4, 1990 (55 FR 18844) and published a final rule on December 27, 1990 (55 FR 53160). The recovery plan for the GCWA was finalized on September 30, 1992. Critical habitat has not been designated for this species.

The GCWA is a small, insectivorous songbird, 4.5 to 5 inches long, with a wingspan of about 7.9 inches. The male has a black back, throat, and cap, and yellow cheeks with a black stripe through the eye. Females are similar, but less colorful. The lower breast and belly of both sexes are white with black streaks on the flanks (USFWS 1992).

The GCWA nests in the juniper-oak woodlands of the Texas Hill Country and winters in the pine-oak woodlands of southern Mexico, Guatemala, Honduras, and Nicaragua. Its entire nesting range is confined to 33 counties in central Texas. Typical nesting habitat is found in tall, dense, mature stands of Ashe juniper mixed with deciduous trees such as Texas red oak, Lacey oak (*Quercus glaucoides*), white shin oak, plateau live oak, post oak (*Quercus stellata*), Texas ash, cedar elm, hackberry (*Celtis occidentalis*), bigtooth maple (*Acer grandidentatum*), American sycamore, Arizona walnut (*Juglans major*), escarpment cherry (*Prunus serotina*), and pecan (*Carya illinoinensis*). This type of woodland is often found in relatively moist areas such as steep-sided canyons and slopes. GCWAs are also occasionally found in drier, upland juniper-oak, i.e., live oak, post oak, blackjack oak (*Quercus marilandica*) woodlands over flat topography. Although the composition of woody vegetation may vary from place to place, Ashe juniper, which is necessary for nest construction, is always present.

The males arrive in central Texas in early March and begin to establish breeding territories, which they defend against other males by singing from visible perches within their territories. The females arrive a few days later but are more difficult to detect in the dense woodland habitat. Usually three or four eggs are laid. The average nest height is 16.4 feet above ground. Eggs are generally incubated in April and, unless there is a second nesting attempt, nestlings fledge in May to early June. By early August, GCWAs begin their migration south.

Most studies report GCWA territory sizes ranging from 0.09 to 0.21 pairs per acre (Ladd 1985). Wahl et al. (1990) reported that density estimates ranged from zero to 0.26 pairs per acre with a median of 0.06 pairs per acre among several sites throughout the GCWA's range. Pulich (1976) classified warbler habitat into excellent, average, and marginal corresponding to 0.05, 0.02, and 0.01 pairs per acre.

The primary threats to the GCWA are habitat loss and urban encroachment. Other factors include the loss of deciduous oaks (used for foraging) to oak wilt, nest parasitism by brown-headed cowbirds *(Molothrus ater),* and predation and competition by blue jays (*Cyanocitta cristata*) and other urban-tolerant birds (USFWS 1992).

III. Environmental Baseline

a. Status of the species within the action area.

Ham Creek Park encompasses approximately 191 acres at the confluence of Ham Creek and the Brazos River (Whitney Lake). It is located at the northern portion of the approximately 20,000 acre *in fee* property surrounding Whitney Lake owned by USACE which lies across portions of Bosque, Hill, and Johnson Counties in northern central Texas (DLS Assoc. 1996). This area lies within the Lampasas Cut Plain subregion of Texas. This subregion is typically vegetated with oaks such as Texas red oak, plateau live oak, and white shin oak on the rocky Edwards limestone summits of small divides (Diggs et al. 1999). On large divides, areas of deeper soil typically support the westward extension of the Washita Prairie (Hayward et al. 1992). On the chalky thin soiled slopes derived from the underlying Comanche Peak limestone, white shin oak, sumac species, and Ashe juniper may be seen; these dry rocky areas have a distinctly desert-like microclimate (Hayward et al. 1992) and thus support plants with xerophytic adaptations. Below these slopes, on benches in valleys or on the summits of uplands lacking caprock, extensive areas of prairie can be found on the clay soils derived from the Walnut formation where it is exposed (Diggs et al. 1999). The basal Trinity Group sands (Paluxy, Antlers, Twin Mountains-Travis Peak) underlying the Walnut formation developed typical Cross Timbers vegetation such as post oak and blackjack oak (Hill 1901).

The topographic diversity and deeply cut streams found in various parts of the Lampasas Cut Plain provide important microhabitat variation. In particular, the diverse microhabitats allow the northward extension of many species otherwise found primarily on the Edwards Plateau. Some plants that were traditionally considered Edwards Plateau endemics can be found in the Lampasas Cut Plain. These include big-tooth maple, plateau gerardia *(Agalinis edwardsiana),* wild mercury *(Argythamnia aphoroides),* Wright's milk-vetch *(Astragalus wrightii),* plateau false nightshade *(Chamaesaracha edwardsiana),* scarlet clematis *(Clematis texensis),* Lindheimer's silktassel *(Garrya ovata var. lindheimeri),* plateau milkvine *(Matelea edwardsensis),* Lindheimer's muhly *(Muhlenbergia lindheimeri),* devil's-shoestring *(Nolina lindheimeriana),* Heller's marbleseed *(Onosmodium helleri),* Lindheimer's rock daisy *(Perityle lindheimeri),* escarpment cherry, turnip-root scrufpea *(Pediomelum cyphocalyx),* plateau spiderwort *(Tradescantia edwardsiana),* Colorado Venus'-looking-glass *(Triodanis coloradoensis),* Lindheimer's crownbeard *(Verbesina lindheimeri),* and twisted-leaf yucca *(Yucca rupicola).* When considering vegetation, soils, geologic layers, and general aspects of the landscape, some parts of the Lampasas Cut Plain are remarkably similar to the Edwards Plateau (Diggs et al. 1999).

Whitney Lake is located within Bosque, Hill, and Johnson Counties, Texas, all of which are located in GCWA Recovery Unit 2. Our current information indicates that potential suitable

habitat in these counties is estimated at 4,147 acres in Bosque, 566 acres in Hill, and 4,197 acres in Johnson. DLS Associates (1996) determined that approximately 2,800± acres, or 14 per cent, of the estimated 20,000± acres of *in fee*, USACE-owned land in the Whitey Lake Project is suitable habitat for the GCWA. USACE has determined that potential suitable habitat for GCWA within the Ham Creek Park property to be 66 acres (Anjna O'Connor, pers. comm. 2005).

Monitoring and research activities for the GCWA within the vicinity of Whitney Lake have been sparsely documented beginning with the 1878 collection of the second GCWA specimen in the United States by G. H. Ragsdale (USFWS 1992). The most recent and thorough accounts of GCWA status at Whitney Lake have come from the USACE-sponsored 1996 study conducted by DLS Associates and follow-up reports conducted by Espy, Houston & Associates, Inc. (1997, 1998).

DLS Associates (1996) observed a minimum of seven and a maximum of nine male GCWAs holding territories at Whitney Lake within three of the five vegetation areas surveyed which did not include Ham Creek Park. Two of four vegetation areas surveyed during the 1997 breeding season revealed two singing males each (Espy, Houston & Associates, Inc. 1997), also not including Ham Creek Park. The subsequent survey (Espy, Houston & Associates, Inc. 1998) yielded observations of 26 GCWAs including one at Ham Creek Park and 23 within close proximity clustered at the apex of Kimball Bend ranging from approximately 0.5 to 1.8 miles from the park property.

Recent GCWA sightings specific to Johnson County include nine individuals near the intersection of Buck Creek and CR 1234, approximately 8.3 miles from Ham Creek Park (Hicks & Company 1999). Information obtained from USACE indicates that on April 24, 2004, Dr. Guilfoyle and Ranger Sam Masters saw one bird and heard at least two others on the Ham Creek Park property. Service records also indicate the documented presence of GCWAs on privately owned land adjacent to the western portion of Ham Creek Park including three individuals in 2001 and nine individuals in 2005. During this same 2005 survey, an additional male was captured and banded on the Ham Creek Park property.

b. Factors affecting species environment within the action area

Ham Creek Park was constructed in the late 1950's and remained fully operational until the early 1980's when the east side of the park was closed due to budget limitations. The west side of the park (Section C) contains a one-lane boat ramp which has remained open and is functional when lake levels are adequate for boat launching.

Factors affecting the species environment include vehicular traffic disturbances from FM 916 on the park's northern and western boundaries and a residential development (Fisherman's Paradise) on the northeastern side. Unauthorized use of off-road recreational vehicles is also known to occur within the action area.

IV. Effects of the Action

The proposed action consists of the development of Ham Creek Park for future recreational use. It is anticipated that direct and indirect effects to the GCWA would result from the action as discussed below. Quantitative measurements of length and area of proposed actions, property perimeters, and on and off-property habitats were calculated using shapefiles provided by USACE and utilizing ArcGIS 9.0.

The direct effects consist of the subsequent construction, operation, and maintenance of a recreational facility for public use. The widening of road ROW to a total width of 36 feet in Section A would remove GCWA habitat averaging approximately 16 feet wide and 5,111 feet in length. An 8 foot wide, 2,799 foot long section of habitat would be eliminated along the northern and eastern portions of the existing roadway in Section B. Maximum total habitat removed by widening the road ROW would be 2.5 acres. Construction of the entrance complex may take place along the roadway in Section A and would directly impact up to 4 acres of GCWA habitat. An additional 2 acres of GCWA habitat could be removed dependant upon the placement of other recreational facilities to be located at unspecified locations in Section B. The regular maintenance of these facilities would also contribute to the disturbance effects discussed further in this section. Construction of the 7,159 foot barbed-wire or pipe perimeter fence and its corresponding 8 foot wide ROW would remove a maximum of 1.3 acres of GCWA habitat in Sections A and B; but, it is anticipated that this ROW would not impact GCWAs if it is constructed outside of the breeding season (Campbell 1995, Horne 2000). However, the regular maintenance of the fence and its ROW could contribute to the disturbance effects discussed further in this section. The construction of these facilities (not including the perimeter fence) is expected to directly remove a total of approximately 8.5 acres of GCWA habitat. The conversion of GCWA habitat into these facilities makes it no longer suitable for GCWAs, thus harming the birds that may utilize the habitat during the breeding season.

The effects of human disturbance related to the construction, operation, and maintenance of the recreational facilities include, but are not limited to, elevated noise levels, presence of humans and machinery, lighting, and increased predation. The adverse effects of human activities on avian communities have been well documented (e.g., Blair 1996, Friesen, et al. 1995, Gutzwiller et al. 1998, Riffell et al. 1996, Wilcove 1988). Additional widening of the road ROW to 36 feet in width could negatively affect GCWAs, since clearing of corridors as narrow as 33 feet have been known to negatively affect GCWA breeding habitat through fragmentation (Horne 2000). Coldren (1998) determined territory selection from habitat edges by GCWAs as related to reproductive success and suggested 492 feet as the point at which GCWA territories are affected by edge habitat.

The proposed hiking/equestrian trails may also negatively affect GCWAs. Miller et al. (1998) demonstrated that composition and abundance of birds can be altered adjacent to recreational trails in forest ecosystems. In particular, some species do not occur, or occur in lower densities, near recreational trails than at greater distances, whereas some species, mainly generalists, were more abundant near trails. Species sensitive to disturbance by humans may avoid areas where human activity is common, or may occur in reduced abundance. GCWAs are especially

sensitive to these effects and are not usually found in close proximity to human developments (e.g., Benson 1990, Engels and Sexton, 1994, Sexton 1987).

Dependant upon the unspecified placement of the hiking/equestrian trails, all GCWA habitat on the property could potentially be subject to the disturbance effects resulting from the construction of these trails, road ROW, and other facilities located within or adjacent to defined GCWA habitat. The design of the park restoration would incorporate No-Build Zones to preserve the remaining GCWA habitat on the property. However, the remaining 57.5 acres of total "on-property" GCWA habitat in Sections A and C (which contains no habitat) less all habitat directly removed, would likely be rendered unsuitable for use by the birds and constitute harassment.

Effects related to harassment are expected to extend outside the boundaries of Ham Creek Park to the point at which they deter GCWAs from utilizing adjacent habitat or affect the reproductive success of birds using the adjacent habitat. Because the property is bound by roadways on the north and west, and the Brazos River to the south, the disturbance effects would only be expected to extend to the adjacent private property east of Section A and north of Section B, and to the USACE-owned property east of Section B.

Indirect effects are those project related effects which are reasonably certain to occur, but later in time. Increases in predator presence could result from increasing the width of the road ROW. Rich et al. (1994) found that corridors as narrow as 26.3 feet may attract cowbirds and nest predators to corridors and adjacent forest interiors. Maintenance and use of these ROWs may also attract cowbirds which forage in mowed areas within ROWs and to powerline poles on which males display (Rich et al. 1994). Although GCWAs prefer nesting in the interior forest (Coldren 1998), they are often observed at forest edges (Sexton 1991). Avian predators (e.g., American crow [*Corvus brachyrhynchos*], blue jay, grackle [*Quiscalus sp.*]) are more abundant in GCWA habitat within 328 feet from edges (Arnold et al. 1996) which may affect GCWA use and/or reproductive success (Coldren 1998, Fink 1996). Further indirect effects in the form of increased predator presence could result from the installation of the hiking/equestrian trails. Miller et al. (1998) indicated that habitat edge species, such as blue jays, which have been shown to be incompatible with GCWA's (Engels 1995, Engels and Sexton 1994), were more abundant on sites with recreational trails than on sites without trails. Additional indirect effects include the potential import and spread of noxious vegetation within the action area. Noxious plants have the ability to displace native vegetation, thereby reducing habitat quality.

The extent of the direct and indirect effects of the action may occur outside the boundaries of Ham Creek Park. Currently, there are no specific guidelines on the distance from commercial/urban land use that would not be expected to affect GCWAs; however, it is believed that large habitat patch size and/or connectivity to larger blocks of habitat reduce the effects (Arnold et al. 1996, Coldren 1998, Sexton 1991). GCWA habitat located east of Section A and north of Section B does not benefit from connectivity to larger blocks of habitat due to encroachment from Fisherman's Paradise residential development. This habitat, located off the park, is also noncontiguous and is made up of five peninsular parcels east of Section A and one narrow linear strip north of section B totaling 32.2 acres ranging in area from 0.4 acres to 11.5 acres. GCWA habitat east of Section B is contiguous and is currently not bound by development

or natural features and is known to support GCWA territories (Espy, Houston & Associates, Inc. 1998).

Based on Coldren's (1998) work, it is anticipated that the effects regarding the construction, operation, and maintenance of the park and the use of the unspecified hiking/equestrian trails could extend from the boundary of the property to a maximum distance of 492 feet onto adjacent off-property habitat totaling 28.9 acres of affected habitat east of Section A and north of Section B (Figure 3). Unaffected habitat remaining beyond this 492 foot point would consist of two small, disconnected fragments totaling 3.3 acres unsuitable to support a GCWA territory and therefore would be included in the action area. East of Section B effects of the action would be expected to impact habitat 492 feet beyond the park boundary totaling an additional 19.2 acres to be included in the action area.

It is expected that harassment of GCWAs related to the effects of the development of the property would potentially reduce suitability of the adjacent off-property habitat a total of approximately 51.4 acres outside the park property. Therefore, the action area includes the approximately 191 acre Ham Creek Park property and up to 51.4 acres immediately adjacent to the eastern side of the property.

IV. Cumulative Effects

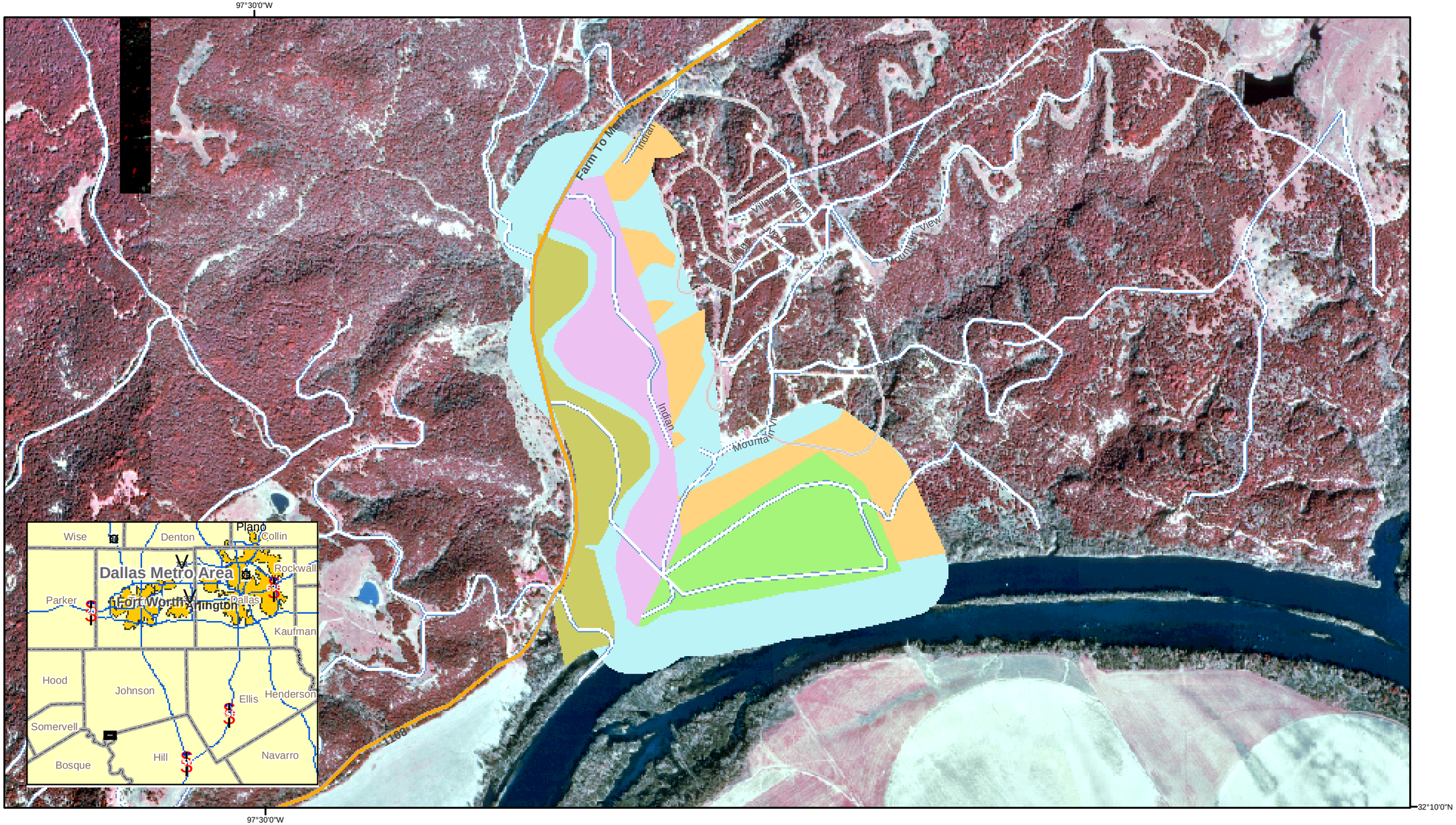
Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

At this time, no future state, tribal, local or private actions are known to be planned within the action area. Site visits, as well as discussions with USACE staff, indicate that most all developable space between USACE property and Fisherman's Paradise has presently been converted to residential properties. Future actions occurring within the action area on adjacent USACE property, including planned expansion of the hiking/equestrian trails east of Section B, would require a separate consultation.

V. Conclusion

Possible harm and/or harassment to GCWAs would only occur on a small portion of the total nesting habitat in Texas. Habitat within the action area is not representative of that which would be considered most critical to GCWA recovery because it is bound by fragmenting obstacles on three sides, comprised of varied vegetative quality, and has been the source of only three confirmed sightings in recent years. Larger contiguous blocks of habitat occur within the vicinity of the action area providing possible relocation opportunities for potentially displaced GCWAs. After reviewing the current status of the GCWA, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the development of Ham Creek Park for future recreational use, as

Figure 3: GCWA off-property affected habitat, Ham Creek Park, Johnson County, Texas.



U.S. Fish & Wildlife Service

Arlington, Texas, Ecological Services Field Office

Projection: UTM Zone 14N, NAD 1983, GRS 1980

Production Date: 12/29/2005

- Off-property GCWA Habitat
- Section A
- Section B
- Section C
- Sections A & B 150m Buffer

0 0.25 0.5 Miles

0 0.5 1 Kilometers

Texas

proposed, is not likely to jeopardize the continued existence of the GCWA. No critical habitat has been designated for these species, therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be undertaken by USACE so that they become binding conditions for any action, grant, or permit issued, as appropriate, for the exemption in section 7(o)(2) to apply. USACE has a continuing duty to regulate the activity covered by this incidental take statement. If USACE (1) fails to assume and implement the terms and conditions or (2) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, USACE must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement (50 CFR §402.14[i][3]).

Amount or Extent of Take Anticipated

The Service anticipates that the proposed action could result in the incidental take of GCWAs. Take would be in the form of harm and harassment. Harm to the GCWA would occur from the direct conversion of approximately 8.5 acres of GCWA habitat on the property proposed for development. Take in the form of harassment would occur on approximately 109 acres of GCWA habitat resulting from the maintenance and future use of project facilities.

Take, in the form of harm and/or harassment, is difficult to quantify and usually cannot be estimated in terms of numbers of individuals. Population densities of GCWAs have been shown to be proportional to habitat quality (Pulich 1976). Habitat quality of Ham Creek Park is perceived to be of varied quality due to vegetation composition; encroachment from residential development to the east and the effects of fragmentation brought about by the residential development; the Brazos River to the south; and FM 916 to the north and west. Estimates of average GCWA territory size within suitable habitat found on USACE property at Whitney Lake are not currently available.

Population estimates for GCWAs are quantified in terms of total estimated area of potential suitable habitat divided by the estimated average area of breeding territories. Because of the difficulty in determining territory size due to varied habitat quality, and because harm to GCWAs will be from actions taken which reduce habitat area, the maximum amount of incidental take allowed under this BO is prescribed in terms of area.

Based upon estimates by USACE detailed in the Biological Assessment, two site visits conducted by USFWS, and a review of publicly available information and scientific literature, it is anticipated that 117.5 acres of suitable habitat for GCWAs could be taken.

Effect of the take

In the accompanying biological opinion, the Service determined that the level of anticipated habitat take is not likely to result in jeopardy to the GCWA.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of the GCWA:

1) Clearing of GCWA habitat to construct the barbed-wire and/or pipe perimeter fence will be scheduled outside (September through February) of GCWA breeding and nesting season. The resulting ROW will be no wider than 8 feet and will also be maintained outside of the breeding and nesting season. All vegetation clearing will be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.

2) The No-Build Zones will be clearly marked prior to construction, vegetation removal, or other earth-disturbing activities to prevent accidental clearing by work crews. The No-Build Zones will be managed as GCWA habitat as appropriate. Buffer areas between the proposed facilities and the No-Build Zones will be planted and/or maintained as native vegetation to create a transitional area between these facilities and remaining habitat.

3) Hiking/equestrian trails developed within No-Build Zones will be designed as ‘nature trails’ with no hard surfaces, minimal vegetation removal, and will be constructed and maintained outside (September through February) of GCWA breeding and nesting season.

4) Impacts related to lighting generated by the facilities will be minimized by the use of directional lighting and buffers around GCWA habitat. Available lighting designs and methods will be investigated and used as appropriate to reduce impacts to birds.

Terms and conditions

In order to be exempt from the prohibitions of section 9 of the Act, USACE must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1) USACE will develop and implement an appropriate monitoring plan for reporting progress in development of the property and implementation of the reasonable and prudent measures. Breeding season surveys will be conducted until construction of all facilities is completed and results reported to the Service. The content, schedule, and format of the monitoring plan will be at the discretion of the USACE.

2) USACE must provide sufficient guidance to its employees and contracted employees to ensure compliance with the reasonable and prudent measures of this biological opinion before the proposed actions may be covered by the incidental take allowed by this opinion.

The Service anticipates that no more than 117.5 acres of GCWA habitat would be taken as a result of the proposed action (max. of 8.5 acres directly removed and max. of 109 acres reduced in habitat suitability). Reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, reinitiation of consultation will be required. USACE must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

The Service will not refer the incidental take of any migratory bird for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

Conservation Recommendations

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The following recommendation is provided for consideration by USACE.

> Whitney Lake currently operates under a Master Plan revised in June 1972 prior to the listing of the GCWA and the black-capped vireo. USACE is encouraged to partner with the Service in the development and implementation of supplements to this Master Plan regarding resident threatened and endangered species as originally suggested by this office in a letter dated October 16, 2001.
>
> The most recent partial survey of USACE property at Whitney Lake for federally-listed species was conducted in 1998 and was the last in a series of three limited surveys initiated in 1996. Updated surveys to quantify listed species habitat and subsequent designations of environmentally sensitive areas (ESAs) could prove useful to USACE and the Service with respect to future development pressure at Whitney Lake by preventing the need for (or streamlining the process of) future consultations. Such information would also be very beneficial to USACE in fulfilling its section 7(a)(1) duties.

In light of the increased and anticipated urban growth around Whitney Lake, we suggest that a proactive approach to conservation through supplementing or revising the current Master Plan could save time and money by identifying areas with specific management needs, expediting future section 7 consultations, and allowing for continued management of USACE property for its intended purposes. In addition to these benefits, further knowledge of the little-known GCWA populations at Whitney Lake and vicinity could prove invaluable to the recovery of the species. Whitney Lake lies entirely within Recovery Unit 2 for the GCWA, which currently has a known population of less than 50 birds. Criterion 1 of the GCWA Recovery Plan requires the protection of enough habitat to support a viable population within each of the eight Recovery Units. Current information indicates that a viable population could range from 1,000 to 3,000 pairs of GCWAs. The large amount of habitat identified on USACE property could further the recovery goal in this unit. The Service would be happy to assist in future habitat surveys and the designation of ESAs as our resources allow.

Reinitiation Notice

This concludes formal consultation on the actions outlined in the request. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

The Service appreciates the cooperation extended by USACE staff and participating parties during this consultation. If further assistance or information is required, please contact Mr. Sean Edwards or myself at the above address or telephone (817) 277-1100.

Sincerely,

Tom Cloud

Thomas J. Cloud, Jr.
Field Supervisor

cc: Regional Director, FWS, Albuquerque, NM

LITERATURE CITED

Arnold, K.A., C.L. Coldren, and M.L. Fink. 1996. The interactions between avian predators and golden-cheeked warblers in Travis County, Texas. Report No. TX-96/1983-2, Texas Transportation Institute of Texas A&M University, College Station, TX, 110 pp.

Benson, R.H. 1990. Habitat area requirements of the golden-cheeked warbler on the Edwards Plateau. Texas Parks and Wildlife Department, Austin, Texas.

Blair, R. B. 1996. Land use and avian species diversity along an urban gradient. Ecological Applications 6(2): 506-519.

Campbell, L. 1995. Endangered and Threatened Animals of Texas - Their Life History and Management. Texas Parks and Wildlife Department, Resource Protection Division, Endangered Species Branch. Austin, TX.

Coldren, C.L. 1998. The effects of habitat fragmentation on the golden-cheeked warbler. PhD Dissertation, Texas A&M University, College Station, TX.

Diggs, G.M., Jr., B.L. Lipscomb, and R.J. O'Kennon. 1999. Shinners & Mahler's Illustrated Flora of North Central Texas. Botanical Research Institute of Texas, Fort Worth, Texas.

DLS Associates. 1996. Endangered Species Investigations Mid-Brazos Project Lake Whitney Hill and Bosque Counties, Texas, DLS Project No. 96-527. Austin, Texas.

Engels, T.M. 1995. The conservation biology of the golden-cheeked warbler (Dendroica chrysoparia). PhD Dissertation, University of Texas at Austin, Austin, Texas.

Engels, T.M. and C.W. Sexton. 1994. Negative correlation of blue jays and golden-cheeked warblers near an urbanizing area. Conservation Biology 8(1): 286-290.

Espy, Houston & Associates, Inc. 1997. Final Report Mid-Brazos Project – Lake Whitney 1997 Endangered Species Investigations, GH&A Job No. 18635, Document No. 971139. Austin, Texas.

Espy, Houston & Associates, Inc. 1998. Final Report Mid-Brazos Project – Lake Whitney 1998 Endangered Species Investigations, GH&A Job No. 19777, Document No. 981242. Austin, Texas.

Fink, M. L. 1996. Factors contributing to nest predation within habitat of the golden-cheeked warbler, Travis County, Texas. M.S. Thesis, Texas A&M University, College Station, Texas.

Friesen, L.E., P.F.J. Eagles, and R.J. Mackay. 1995. Effects of residential development on forest-dwelling neotropical migrant songbirds. Conservation Biology 9(6): 1408-1414.

Gutzwiller, K.J., H.A. Marcum, H.B. Harvey, J.D. Roth, and S.H. Anderson. 1998. Bird tolerance to human intrusion in Wyoming montane forests. The Condor 100: 519-527.

Hayward, O.T., P.N. Dolliver, D.L. Amsbury, and J.C. Yelderman. 1992. A Field Guide to the Grand Prairie of Texas, Land, History, Culture. Program for Regional Studies, Baylor Univ., Waco, TX.

Hicks & Company. 1999. Results of a Survey for the Golden-cheeked Warbler and the Black-capped Vireo New Hope Transmission Line- 1999. Austin, Texas

Hill, R.T. 1901. The topography and geology of the Cross Timbers and surrounding regions in northern Texas. Amer. J. Sci. (3rd Series) 133:291-303.

Horne, J. S. 2000. Effects of open-canopy corridor width on definitions of forest fragmentation and habitat loss for golden-cheeked warblers. Endangered species monitoring and management at Fort Hood, Texas: 1999 annual report. Revised edition. Fort Hood Project, The Nature Conservancy of Texas, Fort Hood, Texas.

Miller, Scott G., Richard L. Knight and Clinton K. Miller. 1998. Influence of Recreational Trails on Breeding Bird Communities. Ecological Adaptations 8(1): 162-169.

Rich, Adam C., David S. Dobkin, and Lawrence J. Niles. 1994. Defining Forest Fragmentation by Corridor Width: The Influence of Narrow Forest-Dividing Corridors on Forest-Nesting Birds in Southern New Jersey. Conservation Biology 8(4): 1109-1121.

Riffell, S.K., K.J. Gutzwiller, and S.H. Anderson. 1996. Does repeated human intrusion cause cumulative declines in avian richness and abundance? Ecological Applications 6(2): 492-505.

Sexton, C.W. 1987. A comparative analysis of urban and native bird populations in central Texas. PhD. Dissertation, University of Texas, Austin, Texas.

Sexton, C.W. 1991. Golden-cheeked warblers adjacent to an urban environment: special studies for the Balcones Canyonlands Conservation Plan. Draft Report prepared for The Nature Conservancy and The Biological Advisory Team, Balcones Canyonlands Conservation Plan.

U.S. Fish and Wildlife Service (USFWS). 1992. Golden-cheeked Warbler (Dendroica chrysoparia) Recovery Plan. Albuquerque, New Mexico. 88 pp.

Wilcove, D.S. 1988. Changes in the avifauna of the Great Smoky Mountains: 1947-1983. Wilson Bulletin 100: 256-271.

PERSONAL COMMUNICATIONS

Bruggman, Ronald. 2005. Whitney Lake USACE, Clifton, Texas.

O'Connor, Anjna. 2005. Whitney Lake USACE, Clifton, Texas.

APPENDIX C
LETTER OF PERMISSION CESWF-97-LOP-1

US Army Corps of Engineers
Fort Worth District

Public Notice

Number: CESWF-97-LOP-1

Activity: Activities at Certain Reservoirs and Federal and State Sponsored Projects

Date: October 6, 1998

The purpose of this public notice is to inform you of the issuance of the Letter of Permission procedure identified above.

Regulatory Program

Since its early history, the U.S. Army Corps of Engineers has played an important role in the development of the nation's water resources. Originally, this involved construction of harbor fortifications and coastal defenses. Later duties included the improvement of waterways to provide avenues of commerce. An important part of our mission today is the protection of the nation's waterways through the administration of the U.S. Army Corps of Engineers Regulatory Program.

Section 10

The U.S. Army Corps of Engineers is directed by Congress under Section 10 of the Rivers and Harbors of 1899 (33 USC 403) to regulate *all work or structures in or affecting the course, condition or capacity of navigable waters of the United States.* The intent of this law is to protect the navigable capacity of waters important to interstate commerce.

Section 404

The U.S. Army Corps of Engineers is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the *discharge of dredged and fill material into all waters of the United States, including wetlands.* The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity.

Contact

Fort Worth District
Regulatory Branch
PO Box 17300
Fort Worth, TX 76102-0300
(817) 978-2681

Albuquerque District
El Paso Regulatory Office
PO Box 6096
Fort Bliss, Texas 79906-0096
(915) 568-1359

Galveston District
Regulatory Branch
PO Box 1229
Galveston, TX 77553-1229
(409) 766-3930

Tulsa District
Regulatory Branch
PO Box 61
Tulsa, OK 74121-0061
(918) 669-7400

LETTER OF PERMISSION PROCEDURE

ACTIVITIES AT CERTAIN RESERVOIRS AND FEDERAL AND STATE SPONSORED PROJECTS

Interested parties are hereby notified that, in accordance with Title 33 CFR 325.2(e)(1), published in the Federal Register on November 13, 1986, the U. S. Army Corps of Engineers (USACE), Fort Worth, Albuquerque, Galveston, and Tulsa Districts, have adopted a Letter of Permission (LOP) procedure for authorizing the work described herein in the State of Texas. The purpose of this procedure is to expedite Section 404 authorization for the activities described below when they would not pose substantial adverse individual or cumulative impacts on the aquatic environment. Each LOP issued will include the general conditions identified herein by reference and case-specific provisions intended to protect the environment, including natural and cultural resources. Work that does not comply with these provisions may require authorization by individual permit. However, compliance with the LOP procedure, including the general conditions, does not guarantee authorization of the work by LOP. Work or structures that would have unacceptable impacts on the public interest are not authorized. Activities requiring Department of the Army authorization that are not specifically covered by this LOP are prohibited unless authorized by a separate permit.

SCOPE OF WORK

Work that may be authorized by LOP using this procedure includes any activity at a USACE, Bureau of Reclamation, state river authority, regional water district, city, county, or utility reservoir, including, but not limited to, bank stabilization, beach nourishment, property protection, and sediment removal. Work authorized by LOP may also include any projects conducted, sponsored, or funded, in whole or in part, by the USACE, U. S. Fish and Wildlife Service (FWS), U. S. Environmental Protection Agency (EPA), Natural Resources Conservation Service (NRCS), Texas Parks and Wildlife Department (TPWD), Texas Natural Resources Conservation Commission (TNRCC), or the Texas Water Development Board. Activities associated with such programs as the Water Resources Development Act of 1986, as amended, Section 1135 Project Modifications for Improvement of Environment, Partners for Wildlife, the North American Waterfowl Management Plan, and the Wetlands Reserve Program and activities at National Wildlife Refuges, State Wildlife Management Areas, and State Parks are eligible for authorization under this procedure.

LOCATION OF WORK

This LOP procedure shall apply to work in all waters of the United States, including navigable waters of the United States, in the State of Texas.

CONDITIONS OF THE LETTER OF PERMISSION

In addition to limitations discussed in the scope of work, projects authorized by LOP are subject to the general conditions contained in Appendix A.

WATER QUALITY CERTIFICATION

The TNRCC has certified pursuant to Section 401 of the Clean Water Act, for the activities for which they are responsible, that the LOP procedure would not result in a violation of established Texas Water Quality Standards provided the standard provisions in Appendix B are followed. The Railroad Commission of Texas (RCT) has waived certification pursuant to Section 401 of the Clean Water Act, for the activities for which they are responsible.

COASTAL ZONE PROGRAM CONSISTENCY

The USACE certifies that the proposed LOP procedure complies with the approved Texas Coastal Management Program and will be implemented in a manner consistent with such program. The USACE certifies that the issuance of this LOP Procedure is consistent to the maximum extent practicable with the Louisiana Coastal Resources Program.

AUTHORIZATION FROM OTHER AGENCIES

The permittee is responsible for obtaining any additional federal, state, or local permits that may be required, which include, but are not limited to:

1. When stream bed materials such as sand, shell, gravel and marl are to be disturbed or removed from state-owned waters in Texas, the permittee may be required to obtain a permit from the Texas Parks and Wildlife Department (TPWD), 4200 Smith School Road, Austin, Texas 78744. All activities occurring on lands owned or managed by the TPWD require a signed agreement from that agency prior to commencing operations.

2. All activities in Texas located on lands under the jurisdiction of the Texas General Land Office (GLO), 1700 North Congress Avenue, Austin, Texas 78701-1495, must have prior approval from that office. The placement of structures onto state-owned stream beds, state-owned uplands, or coastal public lands in Texas may require the issuance of a lease or easement from the GLO.

3. Any work on lands or in waters under the jurisdiction of any river authority or other operating agency may require a permit from that agency.

4. Projects involving government property on USACE reservoirs will require submission of detailed design information to the reservoir manager and USACE approval of the proposed activity, including a real estate consent to easement.

5. Activities within a 100-year floodplain may require a permit from the local floodplain administrator or the TNRCC. In addition, evidence that the project meets non-encroachment restrictions in regulatory floodways may be required.

6. Activities such as clearing, grading, and excavation that would disturb five or more acres of land may require a National Pollutant Discharge Elimination System storm water management permit from the U.S. Environmental Protection Agency (EPA), Region 6, Water Quality Protection Division (6WQ), 1445 Ross Avenue, Dallas Texas 75202.

7. The use of scrap tires for bank stabilization and erosion control requires notification of the TNRCC Waste Tire Recycling Program, P. O. Box 13087, Austin, Texas 78711-3087.

8. Activities associated with the exploration, development, or production of oil, gas, or geothermal resources, including the transportation of oil or gas prior to the refining of such oil or the use of such gas in manufacturing or as a fuel, as described in Tex. Nat. Res. Code Ann. §91.101, may require authorization from the Railroad Commission of Texas, P.O. Box 12967, Austin, Texas 78711-2967, the Federal Energy Regulatory Commission, 3125 Presidential Parkway, Suite 300, Atlanta, Georgia 30340, and/or the Texas General Land Office, 1700 North Congress Avenue, Austin, Texas 78701-1495.

9. The construction, operation, maintenance, or connection of facilities at the borders of the United States are subject to Executive control and must be authorized by the President, Secretary of State, or other delegated official. Proposed activities subject to authorization under this permit and affecting an international water in Texas, including the Rio Grande, Amistad Reservoir, Falcon Lake, and all tributaries of the Rio Grande, may require authorization from the International Boundary and Water Commission, The Commons, Building C, Suite 310, 4171 North Mesa Street, El Paso, Texas 79902.

10. Projects involving construction of a bridge or equivalent thereof across a navigable water of the United States may require authorization from the Commander, Eighth Coast Guard District (ob), Bridge Administration Branch, Hale Boggs Federal Building, Room 1313, 501 Magazine Street, New Orleans, Louisiana 70130-3396.

11. Activities outside the permit area of the USACE that may affect a federally listed endangered or threatened species or its critical habitat could require permits from the U.S. Fish and Wildlife Service (FWS) to prevent a violation of the Endangered Species Act under Section 9.

12. Activities that may affect the land or water use or natural resources of the Texas Coastal Zone may require a Coastal Use Permit or other authorization or waiver from the Texas Coastal Management Program, Texas Coastal Coordination Council, 1700 North Congress, Room 617, Austin, Texas 78701-1495.

13. Activities that may affect the land or water use or natural resources of the Louisiana Coastal Zone may require a Coastal Use Permit or other authorization or waiver from the Louisiana Department of Natural Resources, Coastal Management Division, P. O. Box 44487, Baton Rouge, Louisiana 70804.

APPLICATION PROCEDURES

An application for authorization of work under this LOP procedure must include a written description of the project, proposed work schedule, and the address and telephone number of a point of contact who can be reached during working hours. The information may be submitted on an Application for Department of the Army Permit form (ENG Form 4345) or in any other form convenient to the applicant. A description of the project must include at least the following information, as applicable:

1. The purpose of, and need for, the project.

2. A vicinity map (e.g., county map, USGS quad sheet, etc.) showing the location of the project, including any borrow or disposal site(s).

3. Plan, profile, and cross-section views of all work, both permanent and temporary, in or adjacent to waters of the United States, including wetlands.

4. The volume of material proposed to be discharged into and/or excavated from waters of the United States and the proposed type and source of the material. In cases where the activity may result in a change to pre-construction contours or drainage patterns, provide the reasons why the changes are necessary and a description of the anticipated outcome of the changes.

5. A delineation and description of wetlands and other waters of the United States in the area that would be affected by the proposed work, and a description of the project's likely impact on the aquatic environment. Delineations of wetlands must be conducted using the "Corps of Engineers Wetland Delineation Manual", USACE Waterways Experiment Station Wetlands Research Program Technical Report Y-87-1, dated January 1987 (on-line edition available at http://www.wes.army.mil/el/wetlands/wlpubs.html), including all supplemental guidance (currently includes guidance dated October 7, 1991, and March 6, 1992). The supplemental guidance is included in the on-line version and may also be obtained from your USACE district office. In addition, the width and depth of the water body and the waterward distance of any structures from the existing shoreline.

6. A statement disclosing whether or not any species listed as threatened or endangered under the Endangered Species Act might be affected by, or found in the vicinity of, the proposed project. Direct coordination with the FWS concerning the potential impact of the entire project on threatened and endangered species is strongly encouraged.

7. The applicant should include any other relevant information, including available information on cultural resources and hydrology.

Address applications and inquiries regarding proposed activities to the appropriate district office (see Appendix C):

Fort Worth District: Regulatory Branch, U.S. Army Corps of Engineers, Fort Worth District, ATTN: CESWF-EV-R, P.O. Box 17300, Fort Worth, TX 76102-0300, or telephone the Regulatory Branch at (817)978-2681

Albuquerque District: El Paso Regulatory Office, U.S. Army Corps of Engineers, Albuquerque District, ATTN: CESPA-OD-R, P.O. Box 6096, Fort Bliss, TX 79906-0096, or telephone the Regulatory Office at (915) 568-1359

Galveston District: Regulatory Branch, U.S. Army Corps of Engineers, Galveston District, ATTN: CESWG-CO-R, P.O. Box 1229, Galveston, TX 77553-1229, or telephone the Regulatory Branch at (409) 766-3930

Tulsa District: Regulatory Branch, U.S. Army Corps of Engineers, Tulsa District, ATTN: CESWT-PE-R, P.O. Box 61, Tulsa, OK 74121-0061, or telephone the Regulatory Branch at (918) 669-7400

This application procedure will also suffice as the LOP application for work proposed in navigable waters of the United States under Section 10 of the Rivers and Harbors Act of 1899. When Section 10 applies, the Section 10 work will be evaluated using the Section 10 LOP procedures at 33 CFR 325.2(e)(1).

EVALUATION PROCEDURES

Prior to authorizing any project, the USACE shall conduct a public interest evaluation and coordinate with the EPA, FWS, TPWD; either the TNRCC or RCT (depending on the nature of the proposed activities); the National Marine Fisheries Service and the GLO for projects that would be located within the boundaries of the Galveston District; the Louisiana Department of Environmental Quality and the Louisiana Department of Wildlife and Fisheries for projects along the Sabine River and its impoundments where the Sabine River is the border between the states of Texas and Louisiana; and the Louisiana Department of Natural Resources (Coastal Management Division) for projects in the Sabine River watershed which might affect the land or water use or natural resources of the Louisiana Coastal Zone to obtain their concurrence with authorizing the proposed work under this LOP procedure. Coordination may be by telephone, facsimile transmission, letter, or a combination of the above. Should one of the appropriate agencies not concur, the proposed work would require authorization by individual permit or other means. A verbal or written response from each contacted agency is required to complete the interagency coordination process. Concurrence may not be presumed in the absence of a

response unless written procedures for such presumption are developed between the USACE and the agency in question. Projects within the boundaries of the Texas Coastal Management Plan must have certification from the Coastal Coordination Council of consistency with the Texas Coastal Management Program. Projects in the Sabine River watershed that might affect the land or water use or natural resources of the Louisiana Coastal Zone must have certification from the Louisiana Department of Natural Resources of consistency with the Louisiana Coastal Resources Program. The USACE strongly encourages pre-application coordination with these agencies through the USACE.

Work may not proceed prior to written notification that the USACE has issued an LOP. It is the applicant's responsibility to insure that the authorized project meets the terms and conditions set forth herein; failure to abide by them will constitute a violation of the Clean Water Act. Projects outside the scope of this LOP may be considered for authorization by individual permit.

This LOP procedure shall become effective on the date of the signature of the District Engineers, or their authorized representative.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:
FOR THE DISTRICT ENGINEERS:

Wayne A. Lea
6 October 1998

James S. Weller
Colonel, Corps of Engineers
District Engineer
Fort Worth District

Thomas N. Fallin
Lieutenant Colonel, EN
District Engineer
Albuquerque District

Nicholas J. Buechler
LTC(P), Corps of Engineers
District Engineer
Galveston District

Leonardo V. Flor
Colonel, U.S. Army
District Engineer
Tulsa District

APPENDIX A

GENERAL CONDITIONS OF LETTERS OF PERMISSION ISSUED UNDER "Letter of Permission Procedure, Activities at Certain Reservoirs and Federal and State-Sponsored Projects"

1. In issuing a letter of permission (LOP), the Department of the Army has relied in part on the information provided by the permittee. If, subsequent to issuing an LOP, such information proves to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part.

2. Projects authorized by LOP shall comply with all terms and conditions herein. Failure to abide by such conditions invalidates the authorization and may result in a violation of the law, requiring restoration of the site or other remedial action.

3. An LOP should not be considered as an approval of the design features of any authorized project or an implication that such is considered adequate for the purpose intended; a Department of the Army permit merely expresses the consent of the Federal Government to conduct the proposed work insofar as public rights are concerned. LOP's do not authorize any damage to private property, invasion of private rights, or any infringement of federal, state or local laws or regulations. Nor do they relieve the permittee from the requirement to obtain a local permit from the jurisdiction within which the project is located and to address all non-encroachment restrictions within a regulatory floodway of such local jurisdiction as identified by the Federal Emergency Management Agency.

4. This LOP procedure may be modified or suspended in whole or in part if it is determined that the individual or cumulative impacts of work that would be authorized using this procedure are contrary to the public interest. The authorization for individual projects may also be summarily modified, suspended, or revoked, in whole or in part, upon a finding by the District Engineer that such action would be in the public interest.

5. Any modification, suspension or revocation of the District Engineer's authorization shall not be the basis for any claim for damages against the United States.

6. An LOP does not authorize the interference with any existing or proposed Federal project, and the permittee shall not be entitled to compensation for damage or injury to the structures or activities authorized herein which may result from existing or future operations undertaken by the United States in the public interest.

7. No attempt shall be made by the permittee to prevent the full and free public use of all navigable waters of the United States at or adjacent to a project authorized by LOP.

8. Permittees shall not cause any unreasonable interference with navigation by the existence or use of the permanent and temporary structures authorized by LOP using this procedure.

9. Permittees shall make every reasonable effort to conduct the activities authorized by LOP in a manner that will minimize any adverse impact of the work on water quality, fish and wildlife, and the natural environment, including adverse impacts to migratory waterfowl breeding areas, spawning areas, and trees, particularly mast-producing trees such as oaks and hickories.

10. Permittees shall allow the District Engineer and his authorized representative(s) to make periodic inspections at any time deemed necessary to ensure that the activity being performed by LOP is in accordance with the terms and conditions prescribed herein.

10. The impact of activities authorized by LOP using this procedure on historic properties listed, or eligible for listing, in the National Register of Historic Places (NRHP), shall be taken into account by the USACE prior to the initiation of work. Historic properties include prehistoric and historic archeological sites, and areas or structures of cultural interest which occur in the permit area. If a known historic property would be encountered , the permittee shall not conduct any work in the permit area that would affect the property until the requirements of 33 CFR Part 325, Appendix C, have been satisfied. If a previously unknown historic property is encountered during work authorized by an LOP issued under this procedure, the permittee shall immediately notify the USACE and avoid further impact to the site until the USACE has verified that the requirements of 33 CFR Part 325, Appendix C, have been satisfied.

12. Permittees shall use and maintain appropriate erosion and siltation controls in effective operating condition during construction, and permanently stabilize all exposed soil at the earliest practicable date.

13. Permittees shall remove all temporary fills in their entirety.

14. Permittees shall coordinate all construction activities in federally maintained channels and/or waterways for required setback distances with the USACE prior to application for a permit.

15. Permittees shall place all heavy equipment working in wetlands on mats, or take other measures to minimize soil disturbance.

16. No authorization will be granted for an activity that is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Endangered Species Act, or for an activity that is likely to destroy or adversely modify the critical habitat of such species. Permittees shall notify the District Engineer if any listed species or critical habitat might be affected by, or is in the vicinity of, the project and shall not begin work until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized.

17. The project shall not significantly disrupt the movement of those species of aquatic life indigenous to the water body or those species that normally migrate through the project area unless the primary purpose of the activity is to impound water.

18. Permittees shall properly maintain any structure or fill, including maintenance to ensure public safety.

19. Permittees shall address any potential adverse impacts of the discharge of dredged or fill material to public water supply intakes.

20. Stream realignment is not authorized.

21. Permittees shall avoid and minimize discharges of dredged or fill material into waters of the United States through the use of practicable alternatives.

22. To the maximum extent practicable, permittees shall not permanently restrict or impede the passage of normal or expected high flows unless the primary purpose of the fill is to impound water.

23. Permittees shall design facilities to be stable against the forces of flowing water, wave action, and the wake of passing vessels.

24. This permit does not authorize work in a park, wildlife management area, refuge, sanctuary, or similar area administered by a federal, state or local agency without that agency's approval.

APPENDIX B

Attachment No. 1
USCOE Public Notice No. CESWF-97-LOP-1
September 15, 1997
Page 1 of 3

WORK DESCRIPTION: As described in public notice dated August 8, 1997.

SPECIAL CONDITIONS: None

GENERAL: This certification, issued pursuant to the requirements of Title 30, Texas Administrative Code, Chapter 279, is restricted to the work described in the application or joint public notice and shall expire 5 years from the date of issuance of the Corps of Engineers (COE) permit. This certification may be extended to any minor revision of the COE permit when such change(s) would not result in an impact on water quality. The TNRCC reserves the right to require full joint public notice on a request for minor revision. If this application is a modification of an original permit or any modification thereof for which a special condition was cited by the Commission or a predecessor agency, such conditions shall remain valid. The applicant is hereby placed on notice that any activity conducted pursuant to the COE permit which results in a violation of the state's surface water quality standards may result in an enforcement proceeding being initiated by the TNRCC or a successor agency.

STANDARD PROVISIONS: These following provisions attach to any permit issued by the Corps of Engineers and shall be followed by the permittee or any employee, agent, contractor or subcontractor of the permittee during any phase of work authorized by a Corps permit.

1. The water quality of wetlands shall be maintained in accordance with all applicable provisions of the Texas Surface Water Quality Standards including the General, Narrative and Numerical Criteria.

2. The applicant shall not engage in any activity which will cause surface waters to be toxic to man, aquatic life or terrestrial life.

3. Permittee shall employ measures to control spills of fuels, lubricants, or any other materials to prevent them from entering a watercourse. All spills shall be promptly reported to the TNRCC, Emergency Spill Response, at (512) 463-7727.

4. Sanitary wastes shall be retained for disposal in some legal manner. Marinas and similar operations which harbor boats equipped with marine sanitation devices shall provide state/federal permitted treatment facilities or pump out facilities for ultimate transfer to a permitted treatment facility. Additionally, marinas shall display signs in appropriate locations advising boat owners that the discharge of sewage from a marine sanitation device to waters in the state is a violation of state and federal law.

5. Materials resulting from the destruction of existing structures shall be removed from the water or areas adjacent to the water and disposed of in some legal manner.

6. A discharge shall not cause substantial and persistent changes from ambient conditions of turbidity or color. The use of silt screens or other appropriate methods is encouraged to confine suspended particulates.

7. The placement of any material in a watercourse or wetlands shall be avoided and placed there only with the approval of the Corps when no other reasonable alternative is available. If work within a wetland is unavoidable, gouging or rutting of the substrate is prohibited. Heavy equipment shall be placed on mats to protect the substrate from gouging and rutting if necessary.

8. Dredged Material Placement: Dredged sediments shall be placed in such a manner as to prevent any sediment runoff onto any adjacent property not owned by the applicant. Liquid runoff from the disposal area shall be retained on-site or shall be filtered and returned to the watercourse from which the dredged materials were removed. Except for material placement authorized by this permit, sediments from the project shall be placed in such a manner as to prevent any sediment runoff into waters in the state, including wetlands.

9. If contaminated spoil that was not anticipated or provided for in the permit application is encountered during dredging, dredging operations shall be immediately terminated and the TNRCC, Emergency Spill Response, shall be contacted at (512) 463-7727. Dredging activities shall not be resumed until authorized by the Commission.

10. Contaminated water, soil or any other material shall not be allowed to enter a watercourse. Noncontaminated stormwater from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.

11. Stormwater runoff from construction activities (US EPA Category X) is governed by the requirements of the US Environmental Protection Agency. Applications to apply for a general permit are to be obtained from Region 6, US EPA at (214) 665-7185.

12. Upon completion of earthwork operations, all temporary fills shall be removed from the watercourse/wetland, and areas disturbed during construction shall be seeded, riprapped, or given some other type of protection to minimize subsequent soil erosion. Any fill material shall be clean and of such composition that it will not adversely affect the biological, chemical or physical properties of the receiving waters.

13. Disturbance to vegetation will be limited to only what is absolutely necessary. After construction, all disturbed areas will be revegetated to approximate the pre-disturbance native plant assemblage.

14. Where the control of weeds, insects and other undesirable species is deemed necessary by the permittee, control methods which are nontoxic to aquatic life or human health shall be employed when the activity is located in or in close proximity to water, including wetlands.

15. Concentrations of taste and odor producing substances shall not interfere with the production of potable water by reasonable water treatment methods, impart unpalatable flavor to food fish including shellfish, result in offensive odors arising from the water, or otherwise interfere with reasonable use of the water in the state.

16. Surface water shall be essentially free of floating debris and suspended solids that are conducive to producing adverse responses in aquatic organisms or putrescible sludge deposits or sediment layers which adversely affect benthic biota or any lawful uses.

17. Surface waters shall be essentially free of settleable solids conducive to changes in flow characteristics of stream channels or the untimely filling of reservoirs, lakes and bays.

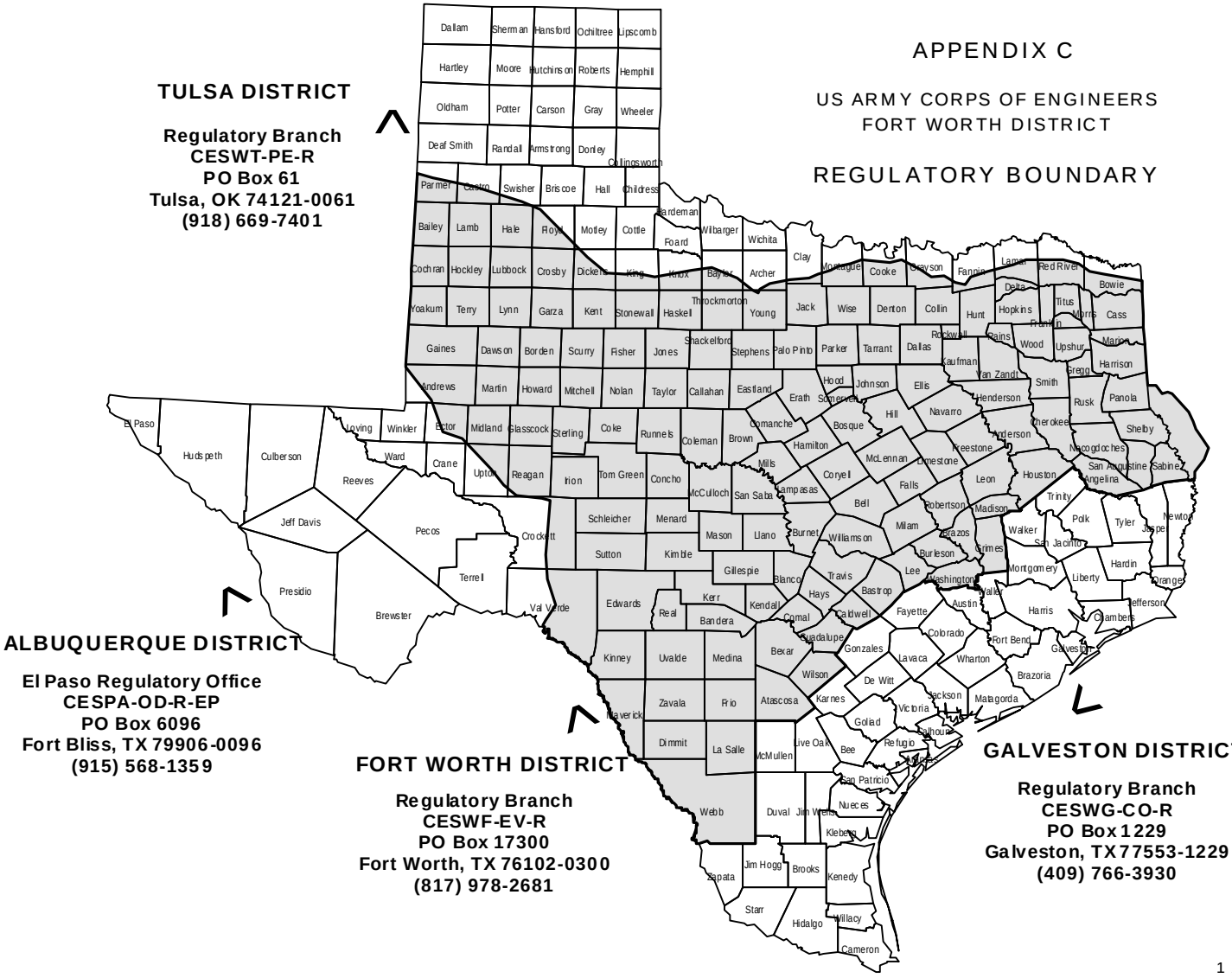
18. The work of the applicant shall be conducted such that surface waters are maintained in an aesthetically attractive condition and foaming or frothing of a persistent nature is avoided. Surface waters shall be maintained so that oil, grease, or related residue will not produce a visible film of oil or globules of grease on the surface or coat the banks or bottoms of the watercourse.

19. This certification shall not be deemed as fulfilling the applicant's/permittee's responsibility to obtain additional authorization/approval from other local, state or federal regulatory agencies having special/specific authority to preserve and/or protect resources within the area where the work will occur.

APPENDIX C

US ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT

REGULATORY BOUNDARY



TULSA DISTRICT

Regulatory Branch
CESWT-PE-R
PO Box 61
Tulsa, OK 74121-0061
(918) 669-7401

ALBUQUERQUE DISTRICT

El Paso Regulatory Office
CESPA-OD-R-EP
PO Box 6096
Fort Bliss, TX 79906-0096
(915) 568-1359

FORT WORTH DISTRICT

Regulatory Branch
CESWF-EV-R
PO Box 17300
Fort Worth, TX 76102-0300
(817) 978-2681

GALVESTON DISTRICT

Regulatory Branch
CESWG-CO-R
PO Box 1229
Galveston, TX 77553-1229
(409) 766-3930

1 April, 1998

APPENDIX D
CORRESPONDENCE, NEWS RELEASES, NOTICES AND COMMENTS

US Army Corps of Engineers
Fort Worth District

News Release

Release No. CESWF-PA-05-033 Contact: Judy Marsicano

For Release: Immediate 1 Aug 05 Phone: (817) 886-1517

Recreational Volunteers Needed for Development of Park at Whitney Lake

FORT WORTH, Texas – The U.S. Army Corps of Engineers is looking for volunteers to participate in a series of workshops for the planning and development of Whitney Lake's Ham Creek Park. Once the park is designed and developed, Johnson County will be assuming management and operation.

Submit your name, address, phone number, and a letter of interest describing how you could contribute to the planning effort to: Whitney Lake Office, 285 CR 3602, Clifton, TX 76634, attention: Ronald Bruggman, Lake Manager. Letters will be accepted until August 30, 2005. Volunteers will be asked to attend regular meetings over an extended period of time. For more information, please contact the Whitney Lake Office at (254)622-3332.

-30-

Visit the Fort Worth website at www.swf.usace.army.mil .

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
WHITNEY/AQUILLA LAKES
285 CR 3602
CLIFTON, TEXAS 76634
Telephone 254-622-3332 Fax 254-622-3243

2 November 2005

United States Fish and Wildlife Service
Ecological Services, ATTN: Sean Edwards
711 Stadium Drive, Suite 252
Arlington, TX 76011

Dear Mr. Edwards:

The U.S. Army Corps of Engineers in conjunction with Johnson County proposes to develop Ham Creek Park at Whitney Lake for future recreational opportunities. Ham Creek Park is located in Johnson County on the northern portion of Whitney Lake. The park encompasses approximately 191 acres and is divided into two areas by Ham Creek.

It is determined that the proposed action will affect the golden-cheeked warbler and its habitat. The U.S. Army Corps of Engineers, Whitney Lake Office, would like to initiate a formal consultation regarding the proposed action.

An initiation package is submitted for your review and consultation. Should you have any questions regarding this request, please contact myself at 254-622-3332 or Mr. Russel Meier at 979-596-1622.

Ronald L. Bruggman
Reservoir Manager

Recd 11/23/05

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
WinSystems Center Building
711 Stadium Drive, Suite 252
Arlington, Texas 76011

21420-2006-F-0055

November 21, 2005

Ronald L. Bruggman
Department of the Army
Fort Worth District, Corps of Engineers
Whitney/Aquilla Lakes
285 CR 3602
Clifton, Texas 76634

Dear Mr. Bruggman:

This letter acknowledges the U.S. Fish and Wildlife Service's receipt of your November 2, 2005, letter requesting initiation of formal section 7 consultation under the Endangered Species Act (ESA). Your request was received in our office on November 7, 2005. The consultation concerns the potential effects to the endangered golden-cheeked warbler (*Dendroica chrysoparia*) resulting from the proposed development of Ham Creek Park for future recreational use. The park encompasses approximately 191 acres and is located in Johnson County, Texas on the northern portion of Lake Whitney.

The information required to initiate consultation was either included with your letter or is otherwise accessible for our consideration and reference. Please refer to the consultation number at the top of this letter in future correspondence regarding the proposed action.

Section 7 of the ESA allows the Service up to 90 calendar days to conclude formal consultation with your agency and an additional 45 calendar days to prepare our biological opinion (unless we mutually agree to an extension). Therefore, we expect to provide you with our biological opinion no later than March 22, 2006.

If you have any questions concerning the consultation process, please contact Sean Edwards of my staff at (817) 277-1100.

Sincerely,

Thomas J. Cloud, Jr.
Field Supervisor

January 20, 2006

Operations Division

Mr. Lawerence Oaks
State Historic Preservation Officer
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711-2276

Dear Mr. Oaks:

The U.S. Army Corps of Engineers, Fort Worth District, plans to redevelop Ham Creek Park at Whitney Lake in Johnson County, Texas. The proposed construction will be confined primarily to areas disturbed by the original construction and operation of the park. Enclosed for your review is a draft report of a cultural resources survey for this project. Based on the results of this survey, we have determined that no historic properties will be affected by the proposed project. We request your concurrence with this determination.

Sincerely,

William H. Collins
Chief, Natural Resources
and Recreation Branch

Enclosure

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

February 16, 2006

NOTICE OF AVAILABILITY

DRAFT ENVIRONMENTAL ASSESSMENT
HAM CREEK PARK DEVELOPMENT
WHITNEY LAKE, TEXAS

Description. Interested parties are hereby notified that the District Commander, Fort Worth District, has prepared a draft Environmental Assessment (EA) and a draft Finding of No Significant Impact (FONSI) regarding the proposed Ham Creek Park Development, Whitney Lake, Johnson County, Texas.

Statutory Authority. This notice is being issued to all interested parties in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the Council on Environmental Quality (CEQ) Code of Federal Regulations (40 CFR parts 1500-1508), and Engineering Regulation 200-2-2.

Background. Ham Creek Park was constructed as part of the recreation plan for Whitney Lake when it was constructed in the 1950's. In the 1980's the park was officially closed as a high intensity recreational facility and was designated as a low intensity use area limited to pedestrian traffic with the exception of a boat ramp that remains open only when lake levels allow use. Recently, Congress Appropriated $900,000 in funds for the construction of a recreation facility to be constructed at Ham Creek Park, Whitney Lake, Johnson County, Texas to be expended in fiscal year 2006. The EA addresses the impacts of four construction alternatives and the no action alternative.

Proposed Action. The proposed action is for the U.S. Army Corps of Engineers to construct a Class A Campground at Ham Creek Park, Whitney Lake as discussed in the EA. This would include paved roads, recreational vehicle and primitive camping sites, picnic sites, group pavilions, an amphitheater, hiking trails, an equestrian center, and a boat ramp and parking spots. Construction would be phased as additional funds are appropriated.

Public Hearing. A public hearing has not been scheduled for this proposed action. Prior to the close of the comment period, any person may make a written request for a public hearing, setting forth the particular reasons for the request. The District Commander will determine whether the issues raised are substantial and should be considered in his decision. If a public hearing is warranted, all known interested parties will be notified of the time, date, and location of such a hearing.

Public Review. Pursuant to the regulations implementing the procedural provisions of the National Environmental Policy Act of 1969 as amended in 1975 (40 Code of Federal Regulations [CFR], Parts 1500 through 1508), the U.S. Department of the Army gives notice that it has prepared the required environmental documentation for the Ham Creek Park Development, Whitney Lake, Texas. This document is available for review on the Fort Worth District Website www.swf.usace.army.mil or at the following addresses:

Cleburne Public Library 302 W. Henderson Street Cleburne, Texas 76033 (817) 645-0934	Whitney Lake Office 285 CR 3602 Clifton, TX 76634 (254) 622-3332	County Judges Office Johnson County Annex Building 1 North Main (Room 304) Cleburne, TX 76033

Comment Period. The comment period for this action is 30 days from the date of this Public Notice. Please address any comments to Mr. Rob Newman, CESWF-PER-EE, Post Office Box 17300, Fort Worth, Texas 76102-0300, or by e-mail at Rob.Newman@swf02.usace.army.mil. Hard or cd copies of the draft EA and FONSI may be requested in writing at the above address or by telephone at (817) 886-1762.

William Fickel, Jr.
Chief, Planning, Environmental,
And Regulatory Division

Mr. Newman/1762
PAXTON, CESWF-PER-EE
HARBERG, CESWF-PER-E
FICKEL, CESWF-PER

Copies Furnished to:
BRUGGMAN, CESWF-OD-WH
COLLINS, CESWF-OD-R
FELIGER, CESWF-OD
HEAD, CESWF-RE
CROSSWHITE, CESWF-OC
MARSICANO, CESWF-PA
MOCEK, CESWF-PM

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

Feb. 16, 2006

Planning, Environmental, and Regulatory Division

Cleburne Public Library
302 W. Henderson Street
Cleburne, TX 76033

To Whom It May Concern:

The U.S. Army Corps of Engineers, Fort Worth District, has prepared an Environmental Assessment (EA) and a draft Finding of No Significant Impact (FONSI) regarding the Ham Creek Park Development, Whitney Lake, Johnson County, Texas. Enclosed is a copy of a Notice of Availability, draft Environmental Assessment, and draft Finding of No Significant Impact.

The Public has an opportunity to review the document for thirty days from the date on the Notice of Availability. To ensure that the public has a chance to review the document, please keep a copy of this document until May 2006, and make it available to the public at their request.

Thank you for you cooperation in this matter. If you have any questions please contact Mr. Rob Newman at 817-886-1762.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental, and
Regulatory Division

Enclosures

Newman/1762
PAXTON, CESWF-PER-EE
HARBERG, CESWF-PER-E
FICKEL, CESWF-PER

Same Letter Sent to:

County Judges Office
Johnson County Annex Building
1 North Main (Room 304)
Cleburne, TX 76033

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

February 16, 2006

Planning, Environmental, and Regulatory Division

Mr. F. Lawerence Oaks
State Historic Preservation Office
P.O. Box 12276
Capital Station
Austin, Texas 78711

Dear Mr. Oaks:

The U.S. Army Corps of Engineers (USACE) is assessing the potential impacts to the environment which may result from the proposed Ham Creek Park Development, Whitney Lake, Texas. USACE is proposing to develop a Class A campground at Ham Creek Park that would be leased to Johnson County after construction. USACE is disclosing all associated impacts for public review in a draft Environmental Assessment (EA).

A Public Notice has been prepared to notify the public of this action and to solicit comments. The Public Notice, draft FONSI and EA are enclosed with this communication for your review and to solicit any additional comments or concerns your agency may have regarding this action including use of letter of permission CESWF-97-LOP-1 to comply with Section 404 of the Clean Water Act.

We began consultation with SHPO with a letter dated January 20,2006 and your agency requested additional information in the area where the boat ramp is proposed to be constructed. The surveys have been completed and the report is being written. As soon as the report is finalized it will be forwarded for your review.

Please address any comments you may have to the contact indicated in the Public Notice. Thank you for your cooperation in this matter. If you have any additional questions or concerns please feel free to contact Mr. Dan McGregor, Archeologist, at 817-886-1573 or Mr. Rob Newman, Environmental Planner, at 817-886-1762

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental, and
Regulatory Division

Enclosures

Newman/1762
MCGREGOR, CESWF-OD-R
PAXTON, CESWF-PER-EE
HARBERG, CESWF-PER-E
FICKEL, CESWF-PER

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

February 16, 2006

Planning, Environmental, and Regulatory Division

Kathy Boydston
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

Dear Ms. Boydston:

The U.S. Army Corps of Engineers (USACE) is assessing the potential impacts to the environment which may result from the proposed Ham Creek Park Development, Whitney Lake, Texas. USACE is proposing to develop a Class A campground at Ham Creek Park that would be leased to Johnson County after construction. USACE is disclosing all associated impacts for public review in a draft Environmental Assessment (EA).

A Public Notice has been prepared to notify the public of this action and to solicit comments. The Public Notice, draft FONSI and EA are enclosed with this communication for your review and to solicit any additional comments or concerns your agency may have regarding this action including use of letter of permission CESWF-97-LOP-1 to comply with Section 404 of the Clean Water Act. We will consider any comments that we receive from you by the close of the comment period as indicated on the Public Notice. Please address any comments you may have to the contact indicated in the Public Notice. Thank you for your cooperation in this matter.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental, and
Regulatory Division

Enclosures

Newman/1762 RN
PAXTON, CESWF-PER-EE BPP
HARBERG, CESWF-PER-E BCH
FICKEL, CESWF-PER
CARMAN, CESWF-PER-RP
Hatcher, CESWF-PER-RR RBH

Same Letter Sent to:

Ms. Ronda Smith
Office of Planning and Coordination
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, Texas 75202

Mr. Thomas Cloud, Jr.
U.S. Fish and Wildlife Service
Ecological Services
711 Stadium Drive, Suite #252
Arlington, TX 76011

Rollin MaCrae
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744

Mr. F. Lawerence Oaks
State Historic Preservation Office
P.O. Box 12276
Capital Station
Austin, Texas 78711

Mr. Mark Fisher
Research and Environmental Assessment Section
Water Planning and Assessment Division
Texas Commission on Environmental Quality MC 150
12100 Park Circle 35, Building F
P.O. Box 13087, Capitol Station
Austin, Texas 78711

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERSS
P.O. BOX 17300, 819 TAYLOR STREET
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF

February 16, 2006

Planning, Environmental and Regulatory Division

SUBJECT: Ham Creek Park Development, Whitney Lake, Johnson County, Texas

Honorable Wallace Coffey, Chairman
ATTN: Mr. Fred Nahwooksy
Comanche Nation
7 Miles N of Lawton on HE Bailey Tpke, Medicine Park Exit
Lawton, OK 73502
580-492-4988

Dear Chairman Coffey:

In accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800, the U.S. Army Corps of Engineers (USACE), Fort Worth District is initiating the consultation process with your office regarding the proposed project noted above. The U.S. Army Corps of Engineers, Fort Worth District is proposing to redevelop Ham Creek Park on Whitney Lake, Johnson County, Texas. The proposed project includes construction of a Class A campground in the 191 acre park.

In an effort to comply with Section 106 requirements, we have had a professional archaeologist survey the proposed park area to locate any cultural resources that would have been impacted by the restoration activities. The survey results did not find any significant archeological resources. We will have the construction monitored to insure archeological resources are protected. If you are aware of any Sacred Sites or other Traditional Cultural Properties that might be affected by this proposed project, we ask that you please contact us immediately so that we may avoid those areas.

We request your comments and input on our proposed plan and construction monitoring. Also enclosed is the Notice of Availability, the draft FONSI and draft EA for your comment. If you have any questions, please feel free to contact Mr. Rob Newman (817) 886-1762.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental
and Regulatory Division

Enclosure

Mr. Newman, Ext. 1762
PARRISH, CESWF-PER-EC
PATTERSON, CESWF-PER-EC
HARBERG, CESWF-PER-E
FICKEL, CESWF-PER

Same Letter Sent to:

Honorable Billy Evans Horse, Chairman
Kiowa Tribe of Oklahoma
Hwy 9 West
Carnegie, OK 73015
580-654-2300

Honorable Gary McAdams, President
Wichita Executive Committee
1 Mile North of Anadarko on HWY 281.
Anadarko, Oklahoma 73005
(405) 247-2425

U.S. Department of Homeland Security
FEMA Region 6
800 North loop 288
Denton, TX 76209-3698

FEMA

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI
MITIGATION DIVISION

PUBLIC NOTICE REVIEW

☐ We have no comments to offer ☒ We offer the following comments

WE WOULD REQUEST THAT THE LOCAL FLOODPLAIN ADMINISTRATOR BE CONTACTED FOR THE REVIEW AND POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT

REVIEWER MITIGATION DIVISION DATE 2-23-06

Newman, Rob SWF

From: Bruggman, Ronald L SWF
Sent: Wednesday, March 15, 2006 1:20 PM
To: Newman, Rob SWF
Subject: Flood Plain Coord

Rob:

I have talked to the Johnson County FEMA POC, Don Burns, (817) 556-6380, and he is fully aware of the Ham Creek Project. He conveyed that he had looked at the plan and saw no concerns.

Ronnie

DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102-0300

REPLY TO
ATTENTION OF:

February 16, 2006

NO COMMENT
Date 3-13-06
Approved by Tom Cloud
Thomas J. Cloud, Jr., Field Supervisor
U.S. FISH & WILDLIFE SERVICE, ARLINGTON, TEXAS

Planning, Environmental, and Regulatory Division

Mr. Thomas Cloud, Jr.
U.S. Fish and Wildlife Service
Ecological Services
711 Stadium Drive, Suite #252
Arlington, TX 76011

ECOLOGICAL SERVICES
ARLINGTON, TEXAS
FEB 21 2006
USFWS
RECEIVED

21420-2006-F-0055

Dear Mr. Cloud:

The U.S. Army Corps of Engineers (USACE) is assessing the potential impacts to the environment which may result from the proposed Ham Creek Park Development, Whitney Lake, Texas. USACE is proposing to develop a Class A campground at Ham Creek Park that would be leased to Johnson County after construction. USACE is disclosing all associated impacts for public review in a draft Environmental Assessment (EA).

A Public Notice has been prepared to notify the public of this action and to solicit comments. The Public Notice, draft FONSI and EA are enclosed with this communication for your review and to solicit any additional comments or concerns your agency may have regarding this action including use of letter of permission CESWF-97-LOP-1 to comply with Section 404 of the Clean Water Act. We will consider any comments that we receive from you by the close of the comment period as indicated on the Public Notice. Please address any comments you may have to the contact indicated in the Public Notice. Thank you for your cooperation in this matter.

Sincerely,

William Fickel, Jr.
Chief, Planning, Environmental, and
Regulatory Division

Enclosures

RECEIVED
15 Mar 2006

Newman, Rob SWF

From: Brandy Bergthold [BBergtho@tceq.state.tx.us]
Sent: Friday, March 17, 2006 2:18 PM
To: Newman, Rob SWF
Subject: Ham Creek Park

Mr Newman

The TCEQ staff have reviewed the Draft Environmental Assessment Ham Creek Park Development that proposes to develop a class A campground at Ham Creek Park. According to the information provided, the Corps proposes to renovate existing roadways, and to construct a 2 lane boat ramp with an associated courtesy dock and parking lot, restroom/shower facilities, an equestrian center, hiking trails, camp sites, picnic sites, and an amphitheater. To construct the boat ramp, 1.7 acres of waters of United States would be dredged. The material would be placed in uplands and may be used in construction activities of the facilities. An on-site investigation found that no wetlands will be impacted by this proposed project. Comments are listed below.

- Dispose of materials recovered from the removal or destruction of existing structures in a proper manner.

- Use appropriate best management practices to minimize short term and long term turbidity and suspended solids in the water where dredging activities will occur.

- Stabilize disturbed soil areas such as building sites and construction work areas (address both construction related and normal operation/maintenance) to minimize soil and/or sediment disruption.

- Decant water from upland disposal areas should not exceed 300 mg/L of Total Suspended Solids.

If you have any questions, feel free to contact me.

Brandy Bergthold
Water Quality Standards Team
Texas Commission on Environmental Quality
MC 150
PO Box 13087
Austin TX, 78711-3087
Phone (512) 239-3503
Fax (512) 239-4420

Newman, Rob SWF

From: Newman, Rob SWF
Sent: Tuesday, March 21, 2006 7:17 AM
To: Art Roberts
Cc: Newman, Rob SWF; Bruggman, Ronald L SWF
Subject: RE: Ham Creek Park Development, Whitney Lake, Texas
Attachments: Ham Creek - Final - 1FEB2006.pdf

Mr. Roberts,

The notice was to inform you about the proposed project and to give the public the opportunity to comment on the action. As listed in the notice, you can download a full copy of the environmental assessment on the Fort Worth District website at www.swf.usace.army.mil . Attached is a layout of the proposed park development plan.

The plan does not include purchasing any additional lands or encroaching onto private property. A perimeter fence is proposed for the development to identify the property boundary line. As stated in the EA, it has to be constructed outside of the Golden Cheeked Warbler breeding season so other construction activities would be conducted first, but the perimeter fence is proposed to be constructed during the first phase of the project as funds are available. If there are not funds to complete all of the perimeter fencing, then as soon as additional funds are allocated perimeter fencing would be the first thing to continue to be built.

I hope this answers all of your questions. If I can be of further assistance please feel free to contact me by email or phone at 817-886-1762.

Rob Newman
Environmental Planner
CESWF-PER-EE
PO BOX 17300
Fort Worth, TX 76102-0300
Office: 817-886-1762
Fax: 817-886-6499

From: Art Roberts [mailto:art.roberts@texstars.com]
Sent: Friday, March 17, 2006 2:52 PM
To: Newman, Rob SWF
Subject: Ham Creek Park Development, Whitney Lake, Texas

I just received the notification in the mail this last week and tried to respond / reply within the allotted time frame; however, I continue to get undeliverable receipts from the e-mail. Not sure if it's on my end or your end, but here we go again.

Rob,

I own most of the land (up to the Corp line) bordering Ham Creek Road on the Fisherman's

Paradise side. I assume that this is just notification of the activity that is going to occur and is not a notice of further encroachment of the adjoining land. I would be interested in also knowing if there will be a perimeter fence encompassing the park area to prevent trespassing and or the wandering of individuals outside of the park area. Is there a park lay out or proposed build that is available for viewing?

Please advise at your earliest and thanks in advance for your response.

Art Roberts, Jr. ✈

Director of Supply Chain Management

Texstars, Inc.

(972)-647-1366

art.roberts@texstars.com

March 20, 2006

Mr. Rob Newman
CESWF-PER-EE
P.O. Box 17300
Fort Worth, TX 76102-0300

RE: Proposed Ham Creek Park Development (Johnson County)

Dear Mr. Newman:

The Texas Parks and Wildlife Department (TPWD) Habitat Assessment Program Staff have reviewed the Environmental Assessment (EA) for the development and reclassification of Ham Creek Park on Whitney Lake from a low-density recreation park to a high-density recreation park. The park consists of approximately 191 acres located on U.S. Army Corps of Engineers (USACE) property and will be leased to Johnson County for operation and maintenance. Proposed developments include improvement to existing roads, a boat ramp with parking, a gate house, group pavilions, day use sites, recreational vehicle (RV) and primitive camping sites, hiking trails, an equestrian center, and an amphitheater.

Site development has been designed to utilize existing cleared areas or previously developed sites as much as possible and minimization of disturbance to existing trees. The project will require the development of approximately 32 acres grassland, 2.4 acres riparian woodlands, and 3.25 acres upland woodlands. Mitigation measures include expanding the riparian zone along Ham Creek within the park through relocating 3-6 inch caliper trees that will be removed from the boat ramp area and through planting additional trees as needed to improve the riparian habitat. Approximately 3 acres of riparian habitat improvements are proposed. The grassland area to be developed for RV use will be reseeded with a native mix of wildflowers, grasses, and forbs.

Within the areas to be disturbed occurs habitat associated with the Golden-Cheeked Warbler (*Dendroica chrysoparia*) (GCWA), a federally listed endangered species. The USACE coordinated with the U.S. Fish and Wildlife Service (USFWS) who prepared a biological opinion in accordance with Section 7 of the Endangered Species Act of 1973. Generally, the biological opinion states that the GCWA habitat at the site is bound by fragmenting obstacles on three sides, comprised of varied vegetative quality, and has been the source of only 3 confirmed sightings in recent years. There are additional occurrences of GCWAs on nearby USACE and private property. Minimization measures include

preserving existing GCWA habitat and the creation of perpetual No-Build Zones within the park. The USFWS issued an Incidental Take Statement for harm to 8.5 acres and harassment to 109 acres of GCWA habitat and provided Conservation Recommendations to the USACE. The Conservation Recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. TPWD supports the USFWS Conservation Recommendations and strongly recommends the USACE follow the recommendations.

TPWD recommends that the terms of the lease to Johnson County include a management plan to protect GCWA habitat and that the USACE periodically conduct site inspections as an oversight measure.

TPWD appreciates the opportunity to review and comment on the EA and apologize for the lateness of this reply. If you have any questions, please contact me at (903) 675-4447.

Sincerely,

Karen B. Hardin

Karen B. Hardin
Wildlife Habitat Assessment Program
Wildlife Division

kbh/11654